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APPROACHING EXPERTISE IN FACILITATION OF ASYNCHRONOUS ONLINE DISCUSSIONS IN COLLEGE COURSES

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Dedication

To my wife Jacqueline and my children John Robert, Anna Margaret, and Abigail Rose.

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APPROACHING EXPERTISE IN FACILITATION OF ASYNCHRONOUS ONLINE DISCUSSIONS IN COLLEGE COURSES

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This study describes common online facilitator strategies of seven expert online facilitators and compares these facilitators' decision-making processes to general strategies and characteristics of experts in other domains. Specifically, this study focuses on how expert online facilitators decide to communicate with discussion participants for the purposes of increasing participant knowledge and skills in college-level online courses. Seven expert online facilitators – identified by authoritative figures - detailed their decision-making and composition process. Common facilitation strategies emerged from the interview data and contextual information. These common strategies were compared with characteristics and strategies of experts in other domains.

Analysis of the data indicates that the participating facilitators: (a) share common decision-making strategies, and (b) demonstrate characteristics that align to characteristics of experts in other domains.

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Chapter One: Introduction

BACKGROUND

Online education opportunities at the post-secondary level at all two and four-year, degree-granting institutions rose over 50% between 1997 and 2002 (Sikora & Carroll, 2002; Waits & Lewis, 2003). Projections indicate that online education will become ubiquitous in college-level instruction and a major source of ongoing professional development (Moe, 2003). Though each online course is unique in content and audience, most courses share components of: 1) content, 2) course management, and 3) online discussions. The content of a course is a representation of the course topics as text, audio, and video. The course management system integrates the syllabi, evaluation, course content and technology to mediate online communication such as discussion boards. Online discussion provides an opportunity for course participants to interact with each other and the facilitator.

Online instructors organize their classes, create assessments, develop assignments, and facilitate online discussions. This study focuses on the actions and expertise of the instructor concerning the process of facilitating an online discussion that is part of an online college course. Hence, the term online facilitator is used throughout this study to indicate a course instructor who is facilitating an online discussion that is part of his/her online course.

Online discussions are either synchronous or asynchronous. In synchronous discussions, all participants log on at the same time and submit their thoughts in a shared space for a fixed period of time. During asynchronous discussions, all participants post their ideas in a shared space without necessarily being active at the same time.

Asynchronous discussions are either unmanaged or facilitated. This study focuses only on discussions that are facilitated.

There are many different definitions of online facilitation (e.g. Collison, Elbaum, Haavind, & Tinker, 2000; James & Rykert, 1998). For the purposes of this study, facilitation is defined as desirably affecting the pragmatic, argumentative, and social aspects of the online discussion through actions in forms of public statements to the discussion group (posts) and private communications (email) to individual participants with the purpose of helping the group achieve its goals (Collison, Elbaum, Haavind, & Tinker, 2000).

Online facilitation has many critical responsibilities. Facilitators control how the discussion is operated and set the requirements for instruction and interpersonal relationships. Operational concerns include: the duration of the discussion, the technology used (blog, threads, email, etc), grading criteria, and student grouping. Instructional and interpersonal concerns include: the topic of the discussion, the expectations for student participation, the tone and level of collaboration of the discussion, and the requirements for depth and level of student contributions.

The quality of asynchronous facilitation impacts student learning and participant satisfaction in online courses. Hence, instructors who begin to facilitate online discussions as part of their course must become experts in online facilitation. Instructors making the transition from face-to-face course delivery to online facilitation require guidance and the support of expert facilitators (Almeda & Rose, 2000; Fredericksen, Pickett, Shea, Pelz, & Swan, 2000). The transition requires fundamental changes in their role as an instructor. Instead of being the primary source of knowledge and course management, online instructors employing asynchronous discussions find themselves in a more guiding and involved role (Arvan & Musumeci, 2000). Facilitation of asynchronous

online discussion differs from synchronous face-to-face discussion in many ways. The most prominent differences are 1) lack of non-verbal cues, 2) extended time to reflect before communicating, and 3) duration of the discussion. Online discussions are void of non-verbal cues such as posture and nodding but have their own cues such as emoticons, ALL CAPS, and writing style. In a face-to-face group discussion, the facilitator has little time to react to participant statements and relies on intuition and experience when deciding when and how to act while asynchronous facilitators have ample time to read and comprehend the discussion and even have time to get feedback from other facilitators before posting. Duration and depth of face-to-face discussions are limited by the time scheduled while online discussions have no theoretical upper limit of activity – the discussion could go on forever and hence can generate an enormous amount of information that is difficult to process in a timely fashion. (Hiltz & Turoff, 1985; Wegerif, 1998).

In order to effectively guide an online discussion, facilitators employ effective facilitation techniques. Generic effective facilitation guidelines are available in books, articles and web sites, but expert support for novice online facilitators is crucial. Expert support can be provided through direct interaction with experts in a mentoring role or vicariously through observation of expert facilitation.

In a growing field like online facilitation, the novices outnumber the experts; this imbalance impedes effective mentoring. Additionally, the geographically diverse and asynchronous nature of online facilitation makes traditional mentoring and coaching difficult. Hence, there is a need to provide expert support for a large, diverse, and constantly growing cadre of novice facilitators without relying on traditional coaching and mentoring techniques.

The process of explicitly describing tacit knowledge and skills of expert facilitators may partially fill this need for expert support. Novices can learn from studying the strategies and techniques used by experts. Expert facilitators may have developed implicit methods for assessing the health of a discussion, defined a set of goals for their actions, and perfected strategies for deciding when and how to act. Though experts are highly skilled in their area of expertise, they are not necessarily adept at teaching others their skills and strategies (Bransford, Brown, & Cocking, 1999). Hence, there is a need to analyze and describe the strategies and actions of expert online facilitators using a generalized framework of expertise. This analysis of expert facilitation would determine the extent to which general expertise frameworks may apply to online facilitation strategies and would provide a description of expert facilitation strategies intended to scaffold novice facilitators.

In the current literature, there are many examples of tips and tricks for online facilitators. There are also many studies that describe theories of general expertise for many domains including chess, medical diagnosis, problem solving, and physics. However, there are no studies that investigate the process of online facilitation through the framework of general expertise.

In summary, the increased demand for online courses requires more online facilitators. As traditional instructors make the transition from face-to-face instruction to online facilitation, they must have sufficient guidance in managing online discussions. This guidance may include studying the strategies of expert online facilitators. The strategies of expert online facilitation are not well defined.

STATEMENT OF PROBLEM

Do expert facilitators of asynchronous discussions in college-level online courses share decision-making strategies and can we apply general frameworks of expertise to describe the facilitators' common strategies and other related actions?

PURPOSE OF STUDY

This study increases the body of knowledge concerning facilitation of asynchronous online discussions in post-secondary instruction by identifying common facilitation strategies among a set of expert online facilitators and then attempts to apply general frameworks of expertise to describe and explain the actions of the expert facilitators. The validity of this application of general frameworks of expertise is explored and discussed. This study focuses on how expert facilitators perceive online discussions, their goals, and their implicit strategies for deciding when and how to contribute to an online discussion. Specifically, this study:

1. Describes a set of seven expert online facilitators, the general context in which they facilitate, and their overall beliefs related to online discussions.
2. Describes strategies each facilitator applied to specific online discussions when choosing how and when to communicate with discussion participants. The description includes:
    a. Facilitator perceptions of the context and of the discussion participants prior to their communication
    b. Deconstruction of the text of the communication focusing on the intended purpose of each phrase
    c. Reasoning behind the timing of the communication

3. Analyzes the data generated by these investigations for the purposes of discovering common expert online facilitation strategies and behaviors related to decision of when and how a facilitator communicates in online discussions,
4. Instead of developing a grounded theory from the data that explains and describes the actions of this set of participants, this study attempts to apply existing expertise frameworks derived from other domains to describe and explain the facilitator actions.

The results of this study are a starting point for future research, tool development, and intellectual discussion.

RESEARCH QUESTIONS

With regards to public and private actions made by facilitators of asynchronous, text-based, online discussions embedded in post-secondary level instruction, the following questions drive this study:

1. Do expert online facilitators employ common strategies when facilitating online discussions and deciding when and how to communicate?
2. How well can general frameworks of expertise be applied to describe the common strategies as well as other characteristics of the online facilitators?

ASSUMPTIONS

This study is based on the following assumptions:

An online facilitator's role in a discussion transcends simple participation.

A facilitator has been defined as someone who desirably affects the pragmatic, argumentative, and social aspects of an online discussion through actions in forms of

public statements to the discussion group (posts) and private communications (email) to individual participants. The facilitator, either by established power structure (i.e. an instructor) or by actions, is perceived differently than other members of the discussion.

An online facilitator can comprehend an online discussion, explain his or her goals for communicating, and describe the reasoning behind the communication.

Widely available books on the topic of online facilitation provide numerous descriptions of tacit rules employed by expert facilitators (e.g. Collison et al., 2000; James & Rykert, 1998). In each of these books, numerous rules that are based on the comprehension of a discussion and actions for a particular purpose are presented for various situations. Public resources on the Internet provide similar, generic rules for online facilitation (e.g. Cowley et al., 2002). Finally, many universities and other entities offer courses for online facilitation that provide techniques and tips to novice facilitators.

These and other, informal evidence such as conversations with expert facilitators, indicate this assumption to be valid.

Well-facilitated discussions benefit the participants in the discussion and improve participant's experience and learning.

Studies indicate that facilitated courses have higher course satisfaction and higher perceived learning outcomes than un-facilitated courses or face-to-face courses. (e.g. Arbaugh, 2001; Fredericksen et al., 2000; Kashy, Albertelli, Bauer & Theonnessen, 2003; Richardson & Swan, 2003)

An expert online facilitator can be identified by authoritative reference

In absence of a clear definition of expertise in online facilitation, the only way to identify expert online facilitators is through references from authoritative sources. While not ideal, it is the only option for this study. Only experienced managers of online facilitators were asked to identify expert facilitators.

IMPORTANCE AND LIMITATIONS OF STUDY

This study increases the body of knowledge on expert online facilitation. The results of this study have many possible applications. Novice facilitators can learn common strategies employed by expert facilitators. Course management tools could be improved to help identify, measure, and track characteristics of online discussions that expert facilitators rely upon when constructing communications. Tools and strategies for enabling expertise developed for other domains could be applied to online facilitation. As a basis for future research, the results of this study may inspire others to measure the outcomes of effective online facilitation strategies.

As an exploratory study with a limited number of participants, the results cannot be generalized to all online discussions or online facilitation contexts. Both expertise and facilitation is highly situational; expert facilitation strategies discovered in this study of online facilitation of text-based asynchronous discussions in post-secondary education courses may or may not apply to other contexts.

Chapter Two: Literature Review

EDUCATION TRENDS

Post-secondary education has become common in the United States and around the globe. Nearly 20,000 colleges and universities worldwide educate more than 84 million students each year. In the United States, the college population has doubled from 7.4 million students in 1970 to almost 15 million in 2002. By 2010, the total numbers of students enrolled in a university or college is projected to rise by another 1-3 million students (Moe, 2003; Sikora & Carroll, 2002).

The increase in numbers of students attending colleges and universities corresponds with the increased value of a post-secondary degree. The salary gap between college graduates and high school gap has more than doubled in the past thirty years.. More people are pursuing continuing education after starting their careers (Sikora & Carroll, 2002). Nearly half of all employed adults in the United States are participating in some form of continuing education (Waits & Lewis, 2003).

As the number of active workers participating in continuing education increases, the percentage of "traditional" students has dropped. Only 27% of undergraduate students meet "traditional" criteria of 1) going to school full time soon after finishing high school, 2) depending on parental financial support, and 3) not working full time (NCES, 2002).

Highly non-traditional students are defined as those students who meet four or more of the following criteria of 1) working full-time, 2) attends school part-time, 3) financially independent, 4) has dependents, 5) is a single parent, 6) does not have a high school diploma, or 7) delays enrollment. Highly non-traditional students are most likely to consider themselves as employees first and believe that their education is beneficial to their current career plans (NCES, 2002). Time commitments of many non-traditional

students may not afford the luxury of participating in scheduled face-to-face, traditional courses. Hence, colleges and universities have had to adapt to this growing audience of non-traditional students by offering an increased number of distance education courses. Distance education affords students the ability to participate in post-secondary education without having to travel to a particular campus at a pre-determined time.

Though non-traditional students are almost twice as likely to participate in distance education than traditional students (Sikora & Carroll, 2002), both non-traditional students and traditional students have embraced distance education. By 2004, almost 2.2 million degree seeking students were projected to be enrolled in distance learning, up from 1.6 million in 1998 (Moe, 2003). Nearly 90% of all public two- and four-year degree-granting institutions offered distance education in 2001, reflecting a 30-40% growth in only three years (Bradburn, 2002; Lewis, Snow, & Farris, 1999).

As the number of distance education courses continues to skyrocket, so does the number of distance education courses available online. Of those institutions offering distance education courses, 90% offer courses using Internet technologies. With nearly 133 million adults having Internet access, including 90% of all college students, Internet based courses have the potential to become ubiquitous. Counting only the top six college-owned online course systems, there were over 330,000 students enrolled in online courses in 2003 and of all institutions currently offering any type of distance education, 88% plan to add or maintain the number of online education courses (Waits & Lewis, 2003).

ONLINE EDUCATION

For the purposes of this study, online education is defined as intentional and structured learning in a computer mediated environment that relies on Internet technologies for communication and content delivery. There are many ways that online

education has been integrated into post-secondary education. These range from face-to-face courses with a class website to completely online courses, with all course content and communication mediated via the Internet.

For courses that are completely online, the overall focus, structure, and desired outcomes typically mimic those of face-to-face courses. Simonson, Schlosser and Hanson theorize that the value of distance education should have the same value as face to face education, though the experiences may be quite different (Simonson, Schlosser, & Hanson, 1999). This is supported by many studies that compare online distance education with face-to-face education. For example, a study on the SUNY Learning Network asked faculty to rate student performance as a comparison between face-to-face courses and online courses. 88% of the faculty rated the online students the same or better than the face-to-face students. The students agreed that even though they perceived the courses were harder, the students claimed to have learned as much or more online than in face-to-face courses (Fredericksen et al., 2000). An experimental study much smaller in scope compared results of a 10-item quiz for one online group and one face-to-face group after a collaborative activity and found no significant difference between groups. The face-to-face group, however, reported less satisfaction with the activity than the online group (Ocker & Yaverbaum, 1999).

Large scale studies indicate satisfaction levels to be as high or higher for the majority of distance education courses than face-to-face courses, (NCES, 1999) but also reported that colleges cite a perceived lack of quality as a significant reason for not providing distance education courses (Waits & Lewis, 2003).

Though the overall goals and results on online courses may be similar to those found in face-to-face courses, the experiences of and interactions between participants and instructors of online courses can be very different from face to face courses.

INTERACTION IN ONLINE EDUCATION

Traditional education relies on communication among and between the instructor and students. The purposes of communication in educational settings were defined by Jenlink and Carr (1996) as: (a) transacting: negotiating or exchanging within existing problem settings, (b) transforming: individuals suspending personal judgments, and (c) transcendent: moving out of mindsets. While the purposes of the communication for face-to-face and online courses can be assumed to the same, the experience of online communication can be an entirely different experience than face-to-face interaction.

A face-to-face instructor can control traditional classroom discourse through well-defined means. Nassji and Wells (1999) summarize works by Bakthin and Halliday by describing a fundamental triadic pattern of Initiate, Respond and Evaluate (IRE). IRE provides a common model for classroom discourse that separates the primary "knower" (instructor) and the learner. The instructor leads the discussion and controls the expected turn-taking and responses.

In online courses, the IRE pattern of communication structure is possible, but studies indicate that it is not the prominent pattern. Turn-taking might not be enforced, and participants can voice their opinions at any time (Bodzin & Park, 2000; Hiltz & Wellman, 1997). Instead of a controlled discussion between instructor and student, online discussions are "essentially a many-many communication tool that structures information exchange and group interactions" (Bodzin & Park, 2000)

In some respects, this departure from traditional interaction may not always be welcome. As the expected interaction sequence breaks down, members may not be as effective communicating with each other (Ahern & Durrington, 1995). Online discussions have other affordances and constraints. Messages are permanent and cannot be "explained away." While messages can be edited many times before they are made

public, the author of a message receives no feedback, such as interruption or non-verbal queues, while writing the message. Feedback comes publicly, and may not come at all (Hammond, 2000).

These differences in communication also influence the roles of the instructor. Online instructors claim that that they spend more time interacting with and are more available to their online students than they are for their face-to-face students. Online instructors have more frequent exchanges with students and spend more time on these exchanges (Bradburn, 2002). These interactions can be more intense and more thoughtful, and the students may have increased expectations for the instructor (Almeda & Rose, 2000). Because of the intensity and frequency of instructor-student exchanges, many believe that they know their online students as well, if not better, than their face-to-face students. (Fredericksen et al., 2000)

However, the volume and intensity of the messages can require much more time per course than traditional face-to-face courses. Instructors report that it takes longer to develop rapport (Almeda & Rose, 2000) and that they sometimes miss the dynamic interaction and banter with the better students (Arvan & Musumeci, 2000). The set of interactions over the duration of a course may benefit both participants and the instructors. Fredrickson et al (2000) found faculty satisfaction correlated with levels of instructor-student interaction. The facilitators in these courses find the process "vibrant" and have learned how to push some "hot buttons" to touch off discussions. Other studies find that online teaching is more satisfying than face-to-face instruction (Hislop & Atwood, 2000), even though distance education courses required more course preps and an overall higher workload (Bradburn, 2002). However, when not compensated appropriately, the additional workload can be frustrating. Other frustrations arise from

high dropout rates and the simple fact that the instructors can't ever interact with their students face to face (Almeda & Rose, 2000).

ONLINE FACILITATION

Interactions between students and instructors in online courses can be private (e.g. email, telephone) or public (e.g. online discussion). Instructor-initiated actions are part of the process of online facilitation. Online facilitation has many different meanings to many different people. For example, James and Rykert define online facilitation as "paying attention to the social processes of the people you're working with electronically to enable the group to achieve its goals" (James & Rykert, 1998). Other books define an online moderator as a "person charged with fostering the culture and the learning in an online dialogue or in a net-course discussion area" (Collison et al., 2000). Most definitions imply an active role in an online environment for a particular purpose.

Though online facilitation can take place in many different contexts, this study focuses on facilitation of asynchronous online discussions for college level courses. The next section defines the nature of the online discussions. The description of online discussions is followed by a summary of what is known about online facilitation in online discussions.

ONLINE DISCUSSIONS

Online discussions have two major forms, synchronous and asynchronous. Synchronous discussion is also known as 'chat'. In synchronous discussion, all participating members convene virtually at a particular time in a shared virtual space (i.e. chat room). As members add their comments to the chat room, the comments are shared with all participating members immediately. The discussion begins when the first member posts, and the discussion ends when the last member leaves the chat room. Each

post in the chat room indicates the author of the post; each post is displayed in the order in which it was received.

Asynchronous discussions, like the ones in this study, take place in a shared virtual space, but are not restricted by time. Instead, asynchronous discussions are organized by topic, also known as 'threads'. A discussion is made up of a set of threads. A participant or instructor authors the root of each thread or topic. This topic typically consists of a title and text. The title is listed at the top level of the community or conference in which it is posted and is may be relatively independent of all other topics. Other participants can reply directly to this topic or to other replies to this topic. The hierarchy of this thread may be maintained and displayed to all participants.

In a truly asynchronous system, threads remain active indefinitely; anyone can add to the thread at any time. However, typical time constraints such as semesters and or assignments cause discussions to be closed at the end of a pre-specified amount of time.

There are many unique characteristics of asynchronous discussion. Without time restraints, participants have ample time to reflect on each others' posts and formulate responses. Posts are public and have an indefinite lifespan (Hammond, 2000). Restraints are rarely placed on maximum numbers of posts. With all of these freedoms not afforded to synchronous discussions, infinite discussions could take place.

ONLINE DISCUSSION ACTIVITY

In practice, however, there are a number of practical limits to the participation patterns in online discussions. For example, discussion threads don't really last forever. The 'lifetime' of a thread is defined as the amount of time between the original post that launched the thread, and the last post before the entire discussion closed (i.e. the semester ends or other practical time constraint ends the discussion). In one study, threads tended to 'die' after three days; less than 10% of three-day old threads had responses and nearly

50% of the threads had no responses at all (Hewitt & Teplovs, 1999). Another study reported that a third of the threads lived less than 2 days, a third between 2-14 days, and another third lived over 14 days (Bodzin & Park, 2000). As both of these studies took place over a typical semester, threads did not live anywhere near as long as they could have. Hewitt surmises that a predictable pattern of thread life arises from the common use of the particular tool. Students in his classes tended to apply a 'single-pass-process' in which they read all previously unread messages, choose to respond to a small percentage of messages, and quit (Hewitt, Webb, & Rowley). This process leads to a finite lifetime for any given thread. Bodzin and Park found that participants scanned the discussions and read only those that interested them (Bodzin & Park, 2000). In either case, threads are bound to die out as not every topic gets a new response.

Models of activity are often based on the number of messages posted to one thread, or to the number of messages posted to a particular discussion. Active threads are defined as having more than a normal number of postings. The normal value can vary quite a bit between discussions. While more than 50% of threads in Hewitt's 1999 study had no responses, only 10% of another class studied by Aviv in 2000 went unanswered (Aviv, 2000; Hewitt & Teplovs, 1999).

With high variability between discussions, it can be assumed that discussion activity does not follow simple rules defining lifespan or posting pattern, but instead depends heavily on the context of the discussion, the participants' motivation, and the quality of the facilitator.

NATURE OF ASYNCHRONOUS ONLINE DISCUSSION

The nature of the discussion may influence the participation. Bodzin and Park employed compulsory and non-compulsory participation areas and found that, not surprisingly, that the compulsory areas had more posts (Bodzin & Park, 2000).

Vonderwell also reflected these findings, when only three students posted questions or comments in any of the non-graded discussions (Vonderwell, 2003). Bodzin and Park also found that certain topic areas salient to their audience had the more activity than less salient topic areas.

While quantitative measures provide a way to easily compare observed activity, other, more qualitative measures provide methods for examining the nature of the discussions. Collison et all divide online discussions into three types: social, argumentative, and pragmatic. Though discussions will rarely fit neatly into just one of these three types, the schema does provide a convenient way of describing threads (Collison et al., 2000).

Jung, Choi, Lim, and Leem (2002) defined social discussions as "interaction between learners and instructors that occurs when instructors adopt strategies to promote interpersonal encouragement or social integration." They found that social feedback from the instructor correlated with learner satisfaction and overall learning outcomes. In other studies, the quality of perceived social presence – the perceived degree of salience of one person (the instructor) on other interpersonal relationships (Richardson & Swan, 2003) – correlates with instructor satisfaction, perceived learning, and satisfaction with perceived learning outcomes.

Pragmatic discussion encompasses all "on-topic" posts and can make up the majority of posts in an online discussion. For example, while Hillman found that there were more opinions shared in online discussions than face-to-face, the majority of the discussion online was on-topic (Hillman, 1999).

To recapitulate, asynchronous discussions have no theoretical finite time or size limit, but in practice have finite sizes. The content of the discussions may affect the size and lifetime of the threads. Discussions can be categorized as pragmatic, social, and

argumentative. With these simple descriptors, one might expect that participation in an online discussion is straightforward. However, this is not the case for many reasons.

INFORMATION OVERLOAD

Even with limited lifetimes, asynchronous discussions can still get quite large and, as one of Wegerif's (1998) study participants noted: "The medium is not as asynchronous as it seems. If a bit of time is missed it is hard to catch up." Hislop surmises that even good discussions have a mix of important points with minor points, off-topic postings, and even incorrect statements. This volume of information that needs to be comprehended by a discussion member can be overwhelming. Even in the early days of computer-mediated communication, Hiltz and Turoff identified information overload to be a significant problem.

> "the volume and pace of information can become overwhelming, especially since messages are not necessarily sequential and multiple topic threads are common, resulting in information overload. Information overload presents itself first as a problem, then as a constant challenge to be overcome. Intensive interaction with a large number of communication partners results in the mushrooming of the absolute amount of information and the number of simultaneous discussions, conferences, and other activities, that goes well beyond normal coping abilities" (Hiltz & Turoff, 1985)

To cope with information overload, online discussion participants and facilitators must develop strategies to manage their time with the content. As noted earlier, Hewitt noted a single pass strategy where students read every previously unread messages without revisiting older topics, while Bodzin and Park noted that students skimmed topic titles to find topics of interest. Leblanc et al found that their subjects were willing to spend additional time developing a filtering strategy that might save them time in the long run (Leblanc, Saury, Seve, Durand, & Theureau, 2001). Hiltz and Turoff (1985)

called for a more computer-enhanced strategy for filtering and screening incoming information.

Other than filtering, the technology, especially the user-interface design employed in an online discussion can influence participants' experiences. Ebersole (1997) claims that the "'holy grail' of interactive multimedia design is to achieve a level of transparency that approaches that of more traditional media." Studies indicate that this "holy grail" can be elusive. Leblanc et al found that a quarter of the first 90 minutes of their activity was spent just learning about the system (Leblanc et al, 2001). In another study, 65% of those who did not participate claimed that technology failures were a primary reason (Kelsey, 2000). Shaw and Peiter (2000) had similar results, with technology problems being the primary reason for non-participation, beating out lack of interest, insufficient time, and lack of understanding. Understanding the system can require significant effort including the ability to perceive the options (i.e. what actions are allowed), make a choice, and complete that action (Jih & Reeves, 1992). Ill-defined systems can result in more random browsing and negatively affect readability (Welsh, Murphy, Duffy, & Goodrum, 1993). The technology that interfaces between the user and the actions can encourage or discourage participation.

INFLUENCES ON ONLINE DISCUSSIONS

There are a number of factors that influence participation in online discussions.

Technology and Anonymity

Technology is only one of many factors that influence a member's choice to either post or remain silent in a discussion. Some felt uncomfortable posting because of the "overly formal, artificial nature" and were reluctant to criticize their peers (Kitchen & McDougall, 1998). To alleviate this issue, some systems allow the members to be

anonymous and found that this anonymity encourages participation in online discussions (Ahern & Durrington, 1995; Teich, Frankel, Kling, & Lee, 1999). One of Vonderwell's participants reported that even the perception of increased anonymity, even though the system was not anonymous, allowed her to express her feelings and ask more questions (Vonderwell, 2003). The perception of self by others, lack of self-confidence, or fear of looking stupid, were common themes in Wegerif's 1998 study when looking at constraints to online participation. One participant study stated that she only posted after realizing that no one else had come forward. Another participants in the study cited low self-confidence early on, but after a few posts she became more active. Yet another was "daunted by the quantity and the quality of the contributions" and felt that he could not add value (Wegerif, 1998). This communication apprehension, defined as "an individual's level of fear or anxiety associated with either real or anticipate communication with another person or persons" (Sherry, 2000) is a common theme among all of these studies.

Help-Seeking

One aspect of online discussions is help-seeking, where a participant actively seeks an answer to a question. It is not surprising that help-seeking encourages participation. Those with particular issues understand the medium as a way to get more help from others and the instructor. Free from scheduled office hours, students note that these environments provide opportunities to ask more direct questions to the instructor than they would have in other mediums (Vonderwell, 2003). By providing feedback to an initial help request, the instructor may encourage additional help requests as learners who seek help once may be more likely to seek it again (Wood & Wood, 1999). Conversely, other members may feel too threatened to ask for help (Karabenick, 2000) or at least exhaust all other options before requesting assistance (Lim, 2001). This is evident for one participant in Wilson and Whitelock's study who stated:

> I look to find if anyone else has posted a query over something I was finding difficult...If the question was already there, then I could look for the responses. If there were no questions posted then I could assume that I was making a silly error and if this still failed to resolve the problem then I could post the question myself (Wilson & Whitelock, 1998)

LEARNING IN ONLINE DISCUSSIONS

It may not be necessary to post in online discussions to be learning from online discussions. Participants may learn vicariously by reading the interactions between other participants and the facilitator (Stenning, McKendree, Lee, & Cox, 1999). These studies were based on Bandura's 1977 study of vicarious reinforcement which showed children could learn aggressive behaviors by watching other children act in an aggressive manner that is reinforced by an adult. Wattenmaker's 1999 study of peripheral participation showed that an observer to a discussion learned at a degree similar to the participants in the discussion. In the online environment, vicarious learning occurs when members of an online discussion observe (i.e. read) interactions between other participants and the participants and the instructor and learn both content knowledge and social norms (Wattenmaker, 1990). Others claim that the nature of computer mediated dialogue allows that which may have remained unspoken to be made available to everyone (Stenning et al., 1999). In their research on vicarious learning, they found evidence that observed interactions may be as effective as direct interaction. Other studies, such as one by Shaw and Pieter, found that 77% of the students reported that reading contributions of others was a worthwhile activity (Shaw & Pieter, 2000).

Observed learning in the online environment is not restricted to content knowledge, however. The observation of teacher interactions experienced by others (i.e. vicarious reinforcement) could be motivating and bring a sense of closeness between

members and instructors, even when no direct interaction occurs (LaRose & Whitten, 2000).

Hence, facilitators' messages in public discussions, both instructional and motivational, will influence the experience for all members of the discussion, not just the active members or the member to which a message may have been directed.

FACILITATOR'S ROLE IN ONLINE DISCUSSIONS

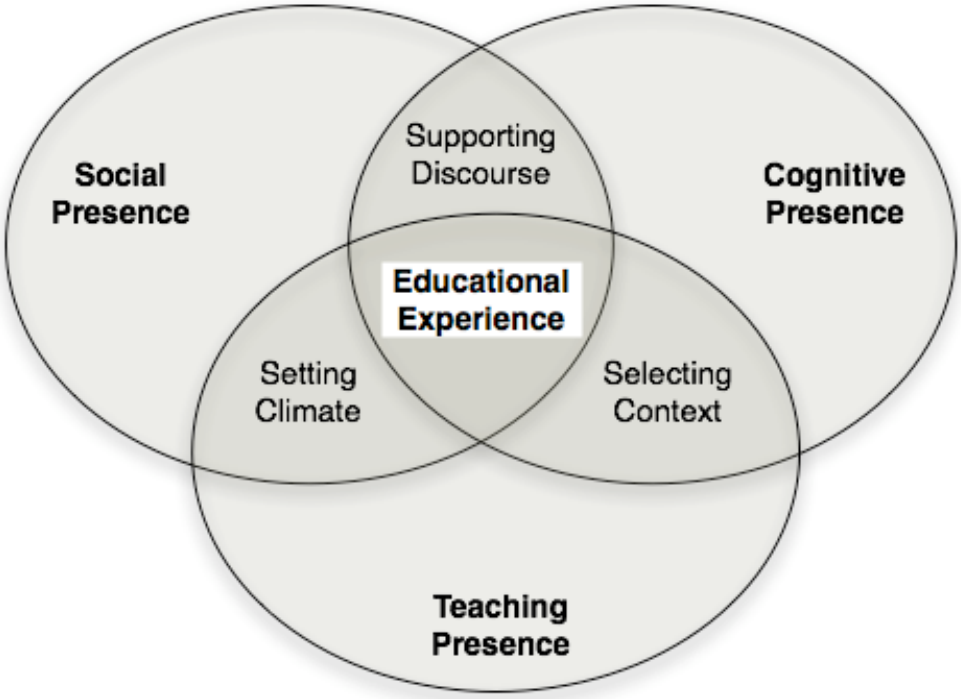

Figure 2.1: Elements of an Educational Experience. Adapted from: Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education. (Garrison, Anderson & Archer, 2000)

Garrison, Anderson and Archer introduce a useful framework for defining the role of the online instructor by describing the overall educational experience as the intersection of the instructor's Teaching Presence and the group's Cognitive and Social

Presences. The three elements of this model are described below in the context of a whole group online discussion:

Cognitive Presence: the extent to which the discussion participants are able to construct meaning through the continued discussion

Social Presence: the extent to which the participants project their personal knowledge and experiences into their communications and becoming "real people" instead of just names on a screen

Teaching Presence: includes the selection and organization of the content, planning of activities, and facilitation of the discussion. While the facilitation of the discussion can be shared, the instructor drives the expectations. (Garrison, Anderson & Archer, 2000)

Using this framework, the facilitator can be defined as the person responsible for increasing and validating the social and cognitive presence of the group members in the online discussion. This responsibility is manifested as the facilitator's teaching presence.

To understand the extent to which the facilitator is succeeding in increasing the social and cognitive presence of the group, assessments aligned with these elements must be defined.

While there are many dimensions to assessing online discussions related to social and cognitive presence, four key areas used in both online and face-to-face communications derived from Grice's cooperative principles are useful to describe: Quantity, Quality, Relevance, and Manner. Each metric used to measure a single post in an online discussion is described below.

Quantity: is the length of the post reasonable to the topic being discussed with the current audience?

Quality: does the post add anything new to the conversation?

Relevance: is the post on topic with the conversation, and does it relate to its parent post?

Manner: is the post logical and free of grammatical errors? Does the subject line align to the post? (Swan, Shen, & Hiltz, 2006)

The relative importance of each of these metrics will vary based on the desired outcomes of the discussion. For example, a discussion focused on generating new ideas may weigh quantity and quality heavier than relevance and manner.

Though it is clear that the facilitator's role is influential in online discussions, there is little research on the subject of facilitator interventions. Advice from experienced facilitators is available in many forms. Some studies report best practices from their facilitators (Cowley et al., 2002; Fredrickson, Pickett, & Shea, 2000; James & Rykert, 1998; Pelz, 2004) and others include a tips such as: "Create opportunities for interaction wtih students and between students", "Create/use activities that build a sense of class community", "Think literal", "Talk; do not write" (Fredrickson et al, 2000), "Role model the behavior you wish others to use", "Approach every contribution with curiosity, expecting surprise and wonder" (Cowley et al., 2002). Books such as "Facilitating Online Learning" and "147 Practical Tips for Online Moderator" provide numerous similar guidelines (Collison et al., 2000; Hanna, Glowacki-Dudka, & Conceicao-Runlee, 2000).

EXPERTISE AND ONLINE FACILITATION

The term "expert" has many connotations and is difficult to define. Traditionally, the terms "expert" and "novice" are used to define each other. An expert is someone who behaves differently than a novice and vice versa. The terms "expert," "experienced," and "specialist" are often interchanged but can be quite different. Experience indicates the amount of time applied to a particular process or topic; expertise implies a difference in the thought processes and actions. A specialist is just someone who focuses on one topic.

In other words, it is quite possible to be an experienced specialist who is not an expert (Bereiter & Scardamalia, 1993) .

Novice vs. expert is not a simple dichotomy. There are varying degrees of novice and expert with no clearly defined point at which a novice becomes an expert. An experienced novice, though not an expert, will most likely be more efficient and less "novice-like" than an inexperienced novice.

Bereiter and Scardamalia (1993) describe three types of knowledge relative to expertise – declarative (or formal), procedural, and tacit knowledge. That is, things you can explain, things you know how to do, and things you know when you need them, but may not be able to describe on demand.

Automaticity is not necessarily a sign of expertise in a particular area. Nor is the possession of a wealth of formal declarative knowledge in a particular domain. Until the formal knowledge is combined with experience, learners may resort to novice-like facilities to solve complex problems that do not easily match their declarative knowledge.

So, what is expertise? Literature such as Ericsson and Simon 1991 book "Toward a General Theory of Expertise" indicates that theories of expertise exist. However the theories found in a review of expertise-related literature are generally just lists of characteristics of experts in particular domains that have basis in research. The lists of expertise characteristics can be broken down into three main categories: (a) problem solving, (b) knowledge, and (c) continuous improvement. Problem solving characteristics describe how experts approach a domain-specific problem and how they execute the solution to the problem. Knowledge characteristics describe how expert store domain specific knowledge. Continuous improvement characteristics describe how experts continuously attack harder problems and look for new and better solutions for old problems. Three tables below list characteristics in these three categories and provide

references to examples in the literature. The lists are primarily based on the list provided in the book "How People Learn: Brain, Mind, Experience, and School. Expanded Edition" (Bransford et al., 1999). The set of characteristics are summarized after each table. The tables do not list all characteristics of expertise; it only lists characteristics that can be observed without comparing performance to novices since this study does not investigate expert-novice differences. These lists are characteristics associated with ill-defined problems and exclude characteristics associated with motor skills or recall.

Examples are drawn from some of the most common groups studied in the expertise literature. These groups are: (a) chess masters, (b) physics problem solving, (c) physician diagnosis, (d) judge sentencing, (e) computer programming, (f) teaching, and (g) executive management.

EXPERT PROBLEM SOLVING	
CHARACTERISTIC	**EXAMPLE**
"Experts notice features and meaningful patterns of information" (Bransford et al., 1999, p 31; Chi, Glaser, & Farr, 1988)	Chess masters Physics problem solving
Experts categorize and weigh provided inputs based on their relevance to the predicament and use “broken leg” cues. (Camerer & Johnson, 1991)	Chess masters Physics problem solving Physician diagnoses Judge sentencing
Experts use forward-reasoning instead of means-end analysis to solve problems (Bereiter & Scardamalia, 1993)	Physics problem solving Physician diagnoses Computer programming
Experts time their actions well (Dorner & Scholkopf, 1991)	Executive management
Experts perform intensive analysis of the problem and self-reflective modification of one’s own mode of action (Chi et al., 1988; Dorner & Scholkopf, 1991)	X-Ray analysis
Experts build representations of the problem before searching for a solution (Ericsson & Smith, 1991)	Physics problem solving Judge sentencing Physician diagnoses

Table 2.1: Expert Problem Solving Characteristics

Problem solving skills are a critical component of expertise. Expert success in solving both well-structured and ill-structured problems is measured relative to recall, accuracy of performance, directionality – forward or backward - of reasoning (Groen & Patel, 1988), and time to complete (Chase & Simon, 1973). As shown in Table 2.1, these problem-solving strategies are common across many domains.

EXPERT KNOWLEDGE	
CHARACTERISTIC	**EXAMPLE**
"Experts have acquired a great deal of content knowledge that is organized in ways that reflect a deep understanding of their subject matter." (Bransford et al., 1999, p 31)	Chess masters Physics problem solving
"Experts' knowledge cannot be reduced to sets of isolated facts or propositions, but, instead, reflects contexts of applicability: that is, the knowledge is 'conditionalized' on a set of circumstances" (Bransford et al., 1999, p 31)	Chess masters Physics problem solving Physician diagnoses Judge sentencing Computer programming
"Experts are able to flexibly retrieve important aspects of their knowledge with little attentional effort." (Bransford et al., 1999, p 31)	Chess masters

Table 2.2: Expert Knowledge Characteristics

Experts don't necessarily have better memories, they have more domain relevant knowledge and it is easy for experts to retrieve this knowledge. Experts in one domain do not necessarily have expertise in another, similar domain. That is, the ability of the expert to apply his/her knowledge is highly related to the relevance of the problem at hand to their domain expectations and norms. For example, even expert programmers had

difficulty figuring out simple programming problems if standard naming conventions were not followed (Soloway, Adelson, & Ehrlich, 1988).

EXPERT CONTINUOUS IMPROVEMENT	
CHARACTERISTIC	**EXAMPLE**
Experts constantly reinvest in their learning and advance on difficult problems in their domain.	Teacher Judge sentencing
Experts tackle more complex representations of recurring problems	Teacher Judge sentencing
Experts rely less fully on routines and seem to be engaged in extending their knowledge rather than merely exploiting it (Bereiter & Scardamalia, 1993)	Teacher Judge sentencing

Table 2.3: Expert Continuous Improvement

Bereiter and Scardamlia (1993) observed that experts are always improving themselves and improving the domain in which they operate. When presented with similar problems over and over, experts do not solve the problem the same way. Instead, they try to solve the problem in different ways until a better solution is found.

Chess Masters

Chess masters solve the problem of choosing the next move by actively searching through a wide variety of options. While they review about the same number of options as novices, the master chess players search through much better options. Hence, they are better at recognizing the cues placed before them. Their recall of chess positions is directly related to the relevance of the pattern of pieces on the board. If the pattern is random (i.e. configurations not likely to be found in game play), the experts show no better recall of positions than novices. However, if the pattern is from a real match, the master chess players are far better at recalling the positions than novices (Chase & Simon, 1973). Hence, chess masters demonstrate expert problem-solving by weighing the data placed in front of them better than novices – not because chess masters have better memory.

Physics Problem Solving

When solving physics problems, novices show that they begin to switch from backward reasoning to forward reasoning after they gather more and more knowledge and experience. Their abstract representations become more focused and only contain relevant data. Expert physics problem solvers rely heavily on abstract representations and are able to recognize the key concepts (e.g. conservation of momentum) before they begin to build a model that helps them solve the problem (Anzai, 1991).

Physician Diagnosis

X-Ray analysis by experts and sub-experts showed that experts were able to quickly adjust initial diagnosis when more data became available. This indicates that they are highly reflective and are able to tell when not all data fits a working hypothesis and then come to the correct conclusion. On the other hand, novices often kept the wrong answer even after being presented data that showed that their initial diagnosis was incorrect (Lesgold et al., 1988).

Physicians asked to provide a diagnosis based on provided symptoms reported in their domain of expertise showed clear forward reasoning strategies. The accuracy of the results was directly related to the physicians' domain. All heart specialists provided at least a partially correct diagnosis of a heart condition, while psychiatrists and other surgeons had much more difficulty getting even partially correct diagnosis (Groen & Patel, 1988).

Judge Sentencing

Expert judges build mental models and weigh inputs in order to deliver sentences that not just fit the crime, but also fit the individual. For example, they deduce that an

convicted drunk driver is an alcoholic based on a number of key data points that were ignored by a novice and deliver a much harsher penalty than non-experts do based on the expectation of future violations. They spend time building representations of the individual and the crime and outline their objectives for the sentence before delivering it. In addition, they took more advanced and in-depth looks at recurring problems such as shoplifting and drunk driving (Lawrence, 1988).

Computer Programming

Computer programmers were studied trying to solve simple problems, write difficult recursive algorithms, and design complex software packages. The studies showed that the expected patterns of code and logical naming of variables was required for even the experts to succeed in the simple problem set. For the recursive problems, only the experts had a chance at success due to the novices' inability to create mental models of the recursions required to solve the issue. Also, the experts approached the complex design problems differently – modeling more at the general user experience than focusing at specific technical issues (Soloway et al., 1988).

Teaching

Two teachers were observed on how they approached the repeated problems that arise in the classroom. One had become an "expert" at managing the classroom, but had become stagnant. The other teacher, who had also become an expert at managing her classroom, spent much more time investigating individual students and addressing their issues in more detail than she had the year before with similar students. That is, the second teacher continuously reinvested – like a scientist – herself to become better at addressing recurring problems.

Executive Management

In Dorner's study the executives timed their actions much better than novice in a time-based simulation of governing a nomadic tribe (Dorner & Scholkopf, 1991). They recognized the importance of not only what their action was but also when they applied it to the ultimate solution to the problem at hand. They also spent more time up front trying to figure out the model than other participants.

SUMMARY

Online facilitation steers the complex process of online discussion. Because of their permanent nature, lack of synchronous feedback, and ill-defined turn-taking procedures, online discussions break from the established norms of traditional communication and require a different approach to online facilitation than for a face-to-face discussion. Technology, anonymity, and other properties of an online discussion can significantly influence participation and experiences. The purpose and use of online discussion varies between contexts and learning occurs not only through direct interaction by also through observed interactions. Expert online facilitators will manage these complexities of online discussions more easily than novice facilitators; and expert online facilitators are expected to display characteristics of experts in other domains.

Chapter Three: Research Method

This chapter describes the selection and application of the research methods for this study. The chapter has five components: (a) selection of the research method, (b) participant selection, (c) data collection (d) data analysis, and (e) ensuring quality of interpretivist research.

SELECTION OF THE RESEARCH METHOD

Before rationalizing the methods employed in this study, it is prudent to describe the researcher's interpretivist paradigm. In this paradigm for this context, the researcher believes that the nature of reality (ontology) is one that is constructed by individuals in a shared context. Knowledge is acquired (epistemology) through a construction at the individual level but is biased by socially shared norms. As a researcher in this paradigm, the knowledge and experiences of a participant can be made explicit through methods that encourage the co-construction of artifacts during meaningful interactions between the researcher and participant in context. The constructed artifacts must be reviewed and accepted by the participants before they are accepted as valid data. The artifacts can be reported in many different forms and the researcher can place some restrictions on the format and scope of the co-constructed data. Though artifacts are constructed by interactions between individuals and the researcher, the interpretivist paradigm allows the researcher to compare and contrast individual constructions through interpretation and quantitative methods. The final result of an interpretivist study is the researcher's interpretation of all the available data.

By taking an interpretivist approach to the research questions, the researcher makes the following assumptions for the context of online facilitation:

1. There is no single set of objective rules that govern the process of online facilitation.
2. The definition of expert online facilitation is socially constructed based on the social norms and values found in each particular situation as well as the world-wide community of online instructors.
3. The process of expert online facilitation is dynamic and changes with evolving technologies, social norms, and values.
4. Each facilitator has a unique perspective on the process of online facilitation and this perspective is integrated with a particular context. The definition of online facilitation may be different for each facilitator.
5. Because the nature of online communication permits widespread social construction of norms and values, there will be some similarities among perspectives on online facilitation as reported by each individual facilitator. These similarities can be compared through qualitative and quantitative means.
6. The results of this study will be most relevant to the participants in the study. The transferability of the results of this study to another context must be determined by someone familiar with that context and who understands this study.

The purposes of the study are to (a) effectively discover and describe common strategies used by expert online facilitators when choosing when and how to communicate in an online discussion, and (b) determine if the general frameworks of expertise can be used in place of a grounded theory to validly describe and explain the common strategies and other actions employed by these expert online facilitators. In that decision-making strategies are very personal and are not readily observable, a qualitative

research method is required to collect the data and discover how each participant constructs his or her strategies. Qualitative methods also allow researchers to investigate perceptions that people have when making decisions.

Many expertise-related studies use a think-aloud protocol that "turns up the volume" of the participants' thought processes as they complete a task. In the context of discovering expert knowledge, think-aloud protocols ask the expert to verbalize the thought processes that lead up to a decision or other action.

The basic protocol is an iterative process in which the interviewer focuses the expert's attention on explaining statements and assumptions that form the basis of a decision. In most cases, think-aloud methods are used *during* the actual process and are not applied to historical interactions unless the interaction was captured on video.

In this case, the think-aloud method has merit in that the past interaction has been captured as part of the record of the online discussion or via email. That is, the context leading up to the action as well as the action itself is recorded electronically and is still available to the participant to review when thinking-aloud.

Another difference between this study and other expertise studies is that it does not use artificial problems outside of the learner's context. Online facilitation is highly specific to the participant's courses and students; it is not feasible to ask them to analyze a discussion thread from someone else's course and expect to get valid data.

PARTICIPANT SELECTION

This study focuses on the expert facilitation of online asynchronous discussions taking place in college-level classes or professional development courses. Seven facilitators were purposively selected to provide a wide range of possible responses for similar types of educational situations.

Due to the lack of clear definition of an expert facilitator, there is no easy way to determine if an experienced facilitator is an expert. Hence, the criteria for selecting participating facilitators need to be based on self-reported expertise and through referrals

Participating facilitators must:

1. Be an experienced facilitator, with at least five years experience facilitating online courses at the post-secondary or professional development level
2. Be recommended by an accepted expert in the field of online education or online facilitation
3. Be an instructor of a purely online course that is (a) either in-session or out-of-session for less than one long semester, (b) heavily dependent on asynchronous discussion for participant and instructor interaction, and (c) part of an established (older than two years) online program.

Facilitators were chosen from seven different organizations. A more detailed look at the participant demographics is provided in table 3.1.

Participant Recruiting

The researcher contacted leaders in the online education field and asked for referrals to expert facilitators that met the minimum requirements. The researcher contacted potential participants; official invitations and informed consent forms were sent to each potential participant who met the requirements and expressed interest in being a member of the study. The recruiting letter included a clear outline of the eligibility requirements and time commitments for participating in this study.

The recruiting letter and informed consent form are included in Appendix A and Appendix B, respectively. Once a participant agreed to be a part of the study the researcher scheduled times for discussions and interviews.

Participant Validation

The participants were trusted to provide accurate information concerning their eligibility to participate in the study. Since the participants are found via authoritative referral, no additional validation was performed other than a perfunctory check of their instructor status at their university.

Participant Expectations

The participant was expected to locate potential sources for discussion. They were asked to find at least one online discussion that they were facilitating in their course that had examples of them communicating as the facilitator to the group or to an individual. The participant was expected to have this information available at the time of the interview.

Participants

There were seven participants in the study. The table below summarizes basic participant demographics.

	Louise	Maya	Rick	Casey	Jennifer	Julie	Anna
Instructor Status	Special Lecturer	Associate Professor	Professor, Assistant Dean	Lecturer	Professor, Associate Dean	Associate Professor	Assistant Professor
Years Facilitating	7	5	10	9	10	10	8
Online Facilitator Training	1 yr mentor, books, peers	Peers / Community / Literature / Research	Colleague	Quality Matters	Consortium	Peers, University Support	Wisconsin Course
Type of Employer	Medium University (10-20,000)	Large University (>20,000)	Medical Branch (<2000)	Large University (>20,000)	Medium University (10-20,000)	Large University (>20,000)	Large University (>20,000)
Work Location	On Campus	On Campus	On Campus	On Campus	On Campus	On Campus	On Campus

Table 3.1: Participant Demographics

DATA COLLECTION

Data was collected from three sources: telephone interviews, documentation provided by the participant, and documentation about the participant and the participant's organization.

The interviews were the primary source of data. Each participant took part in one 1-hour interview. The interviews were semi-structured. A set of detailed questions about the context of the discussion and the participant were followed by more open-ended questions with follow-up regarding the actual communications that were being studied. The interview protocol used is attached as Appendix C.

During the interview:

1. the researcher confirmed information about the participant regarding the participant's experience, training, and organization
2. the participant and researcher constructed a picture of the participant's beliefs about online facilitation
3. the participant walked the researcher through one or more communications (i.e. post to open discussion or private email) that the participant had used to facilitate an online discussion. This included:
    - perceptions of the discussion and its members that led to the decision to communicate
    - reasoning behind the timing of the communication
    - in-depth deconstruction of the actual communication

The interviews were recorded with the participant's consent and transcribed. The transcriptions were used for later coding and analysis. After the interview, the researcher and participant confirmed the researcher's descriptions of the participant's actions via email or telephone.

The documents provided by the participant included: references to training material and books they had used to advance their knowledge of facilitation, the text of the communication(s) being studied, and any information about the course in which that the discussion took place that was not publicly available.

In order to expedite the interview process, the researcher used Internet search techniques to discover as much about the participant, including the participant's background, experience, current courses, organization, and other publicly available information. The participant confirmed this information to be accurate before being included as valid data.

DATA ANALYSIS

The researcher focused on discovering emerging themes across participants. The discovery of common strategies was conducted through Strauss and Corbin's grounded theory coding. In this analysis method, the researcher first discovers a wide range of categories through open coding of the data, then organizes the categories before finally reducing the categories into themes and validating the themes.

The portion of the interview transcripts that related to the participants' decision-making strategies were broken into meaningful chunks. Each chunk was coded and given a category. These categories were then combined and reduced to a manageable set of top-level categories and associated subcategories.

The next logical step in a grounded theory study is to create and a theory that explains what arose from the data from this set of participants. In this study, the theory-development step is replaced by applying existing general frameworks of expertise. By utilizing existing frameworks, the study indicates how well these general frameworks may – or may not – apply to online facilitation.

ENSURING QUALITY OF INTERPRETIVIST RESEARCH

In interpretivist research, the quality of the study relies on a number of factors. Though these factors vary by name and meaning among research strategies, four common measures of quality in interpretivist research are credibility, dependability, confirmability, and transferability. Each measure, and how the measure is addressed in this study, is described below.

Credibility

Credibility indicates the likelihood that the data reported is an honest account of the participant's perspectives. Credibility is typically ensured through prolonged engagement between the researcher and the participant, peer-review of the data being generated, referential adequacy (availability of original data including transcripts), and member-checking of the results with the participant.

Prolonged engagement was limited to the series of interactions that the participant had with the researcher about the topic. All data collection, descriptions, and conclusions were shared and member-checked with each participant. All data collected in the process was organized and available throughout the analysis.

Confirmability and Dependability

Confirmability and dependability evaluate the ability to trace the reported results back to the source of the data. Confirmability and dependability are ensured through maintaining an audit trail of all data generation and continuously adding to a reflective journal.

The researcher kept a reflective journal during the data collection process and maintained records of all data collected.

Transferability

Transferability is a measure of the likelihood that a reader of the study would be able, when applicable, to relate his or her own situation to the reported results. Transferability is typically ensured via rich descriptions of participant's perspectives. The case studies in the following chapter provide both a broad description of the participant and an in-depth look into very specific decisions and actions made by the participant.

Chapter Four: Findings

A case study has been prepared for each participant. A table summarizing key demographics and interesting statistics is provided at the end of this chapter.

CASE STUDY ONE: LOUISE

Introduction

Louise is a special lecturer at a medium size university (10-20,000 students) where roughly 25% of the university students are fully online. Louise teaches both face-to-face and online courses related to instructional technology and performance improvement. She has been teaching online for about 7 years and actively publishes research on learning styles.

A nationwide expert for online learning referred a colleague of Louise's for this study; that colleague then referred Louise.

Course Overview

For this study, Louise chose to describe her facilitation of a graduate course in the Engineering school focused on motivation as it relates to employee performance. During the course, the students learn strategies for improving motivation among employees. Students discuss strategies in the discussions and many of the students are able to test out the strategies in their workplace.

The three-credit course follows a traditional 16-week semester schedule. The course is completely online and does not have any synchronous class meetings.

The section that is discussed has 14 students in it; classes are capped at 15 students since that seems to be an optimal size for the online discussions for this program. Some other sections are allowed to accept 20 depending on the experience of the

facilitator. The students in the course are located across the United States and some are overseas. The grade for the online discussions counts for roughly 40% of the grade and online discussions are considered to be critical to the success of the class. Online discussions take place every week throughout the semester. Louise posts an average of three discussion questions at the beginning of the week and the students can respond to any or all of the topics until the end of the week.

Becoming an Expert

Louise was hired as a special lecturer by the College of Engineering to teach both face-to-face and online courses, even though she had not officially taught online at that point. Prior to being a full time instructor, Louise was a graduate student at the same university. As a graduate student, she acted as a teaching assistant for an online course. During this time she was exposed to the process of teaching online courses and was able to observe how the professor facilitated the online course. She now teaches both online and face-to-face courses.

Even though she had some experience with the online course model as a teaching assistant, Louise still felt like teaching her first course solo was "baptism by fire." While she has read a number of how-to books on online facilitation, she believes that there is no substitute for experience. Louise really hated the medium at first since it was a major change from what she was used to:

> The first time I taught it, I hated it. I absolutely hated it. I think that the inclination at first is to handle the course the same way that you do in person, and it just doesn't work that way.

Her introduction to online discussions was as equally discouraging: "When I first started out I would pose a discussion question and get total silence." As she taught more and more online, she felt that it all came together for her when she realized that there

were a number of things that you can do online that you cannot do in a face-to-face classroom.

> I think that is the biggest breakthrough of all, when you say, "Hey I can do this – that I couldn't do in a regular classroom." Once you get that figured out, I think that makes a huge difference in how you design the program and how you approach it from a facilitator's standpoint.

Louise now loves teaching online, and appreciates and emphasizes the strengths of teaching online. She feels freer to ask questions that require more reflection than time would allow in a face-to-face classroom. The asynchronous nature of the discussions gives her time to reflect and act upon critical knowledge or statements that her students make. Louise believes that even though the online courses require a larger time commitment, they are a much richer and engaging experience for both her and her students

Louise and other professors who teach in this program share ideas on what works, and what is not working. For example, a colleague had been experimenting with small-team activities and seemed to have success with those activities. He shared that success with Louise in an informal way, and Louise plans to implement his ideas the next time she teaches the class. In return, Louise had shared with her peers examples of using case studies that other professors may use in their future classes.

In spite of this regular collaboration that takes place among her peers about strategy, Louise believes that online facilitators are more alone than not.

> We are kind of alone in online facilitation. People in your class see it, occasionally your supervisor or the chair will look and see, but not very often I don't think. Pretty much it's your own domain, and you don't know what goes on in other people's classes.

Regardless of the support that others provide, Louise believes her growth comes from constantly trying to improve on what she is doing.

Beliefs about Facilitation of Online Discussion

Louise believes in being a facilitator who operates behind the scenes. Her primary goal is to get her students to participate actively in the discussions – to share ideas and experiences with each other. She strives to make connections between the discussions, course materials and real-world experience. Connections she makes between the current class and past classes are particularly valuable for the student because the program has a comprehensive exam at the end. Louise constantly leverages the life experiences of individual students to clarify the connections between course concepts and real-world experience.

She measures success of an online course by how engaged and enthusiastic the students are – and how little she has to "pull teeth" to sustain the conversation. Louise values the quality of the students' posts; she expects the students to bring in outside resources and experiences to share with each other.

> I am trying to make the discussion more interesting and trying to make it go in another direction to a higher level of thinking. For me, the thinking thing is very, very important. I don't want them to just get knowledge level [learning], I want them to be able to analyze, synthesize, and evaluate [their learning] as well.

Louise grades participation on a four-point scale for each student participating in the discussion. She started out with an elaborate schema but most students and faculty were able to distinguish quality posts from simple "Me too" posts. The students are required to post once before Wednesday, and then twice again on two separate days between Wednesday and Saturday. She provides feedback to the student by updating a table in the private discussion areas she has for each student. Students thrive on the daily feedback and often inquire when they don't get points for their posts.

Facilitating Online Discussions

Louise's discussions typically contain around 90-100 posts per week spread over an average of three different discussion topics. Louise posts approximately 20-30% of the messages. She spends between 7-8 hours per week on the discussion threads. She typically reads through the discussion and chooses where to post based on the discussion progress; she does not typically respond to every post.

Louise is methodical about how she reviews the threads and composes her responses carefully. She often reads through a number of threads and marks certain ones for future attention. She does a second pass where she brings in links to the course content and begins to compose her posts. Her course management system allows her to compose her responses offline, and review/edit them before they go up to the main system.

> I don't just shoot something off and send it. I always think about it first, especially if it could be touchy. I am very, very careful to make sure that nobody feels slighted, or no one feels like I am saying, "that was a very stupid thing to say." Which I would never do, but…sometimes if you go back and read what you wrote, you think, "Oh, man! That wasn't what I intended at all!" I am usually very, very careful before I post something.

Even though this reflective model of instruction is much more time consuming than teaching face-to-face, Louise really enjoys the online discussions and values the depth that she can reach with discussions that were never possible face-to-face.

Louise believes that students feel somewhat protected by the limited anonymity afforded by the online system. Hence, Louise does not require her students to post pictures on their student home pages.

Louise sometimes summarizes the discussion to date in order to make it easier for her students who have very busy schedules to catch up with the discussion. However, her

intention is to provide a summary of the discussion to-date, and not to slow down or wrap-up the overall discussion.

> I am assuming that if they are going to read anything, they are going to read my posts. They are going to read the people that they like, and that over time they have started to agree with. They want to find out what [a particular student] has to say about this issue, but they are also going to read my posts. So, I try to post at times to try to help people see the different sides of whatever the issue is because I really don't respond to every one.

Louise often sees posts where students are unsure of the quality of their posts, and the students tend to qualify the posts with statements like "This is stupid..." In those cases, Louise reinforces the student, and directs the student in an appropriate direction.

Louise tries to maintain a clear presence in the online discussion, even if it is tough to think what to say:

> I like to have a presence and sometimes I have to try to work hard at finding something to post…especially if they seem to be going pretty well on their own…I think that it is really important that I am in there and they know that I am in there.

Besides making it clear to everyone that she is reading everything that they write, Louise is striving to make the discussions more interesting and take it to a higher level of learning.

Louise knows her students well, even though she has rarely met them face-to-face. The department does have a graduation dinner at the campus where some of the students gather to meet each other before they graduate. Louise encourages her students to share their experiences; one student had the opportunity to rant a little about her job (related to the course topic):

> I think it is pretty funny. She was a student who was having some major problems with motivation at work.…her supervisor just sounded like a total jerk. She was always posting things like that, which I think is really good. It gives her a chance to vent somewhere, because she couldn't at

> work. Not only that but she had 13 other people [other than me] to provide advice… I thought that was really a cool thing.

While beneficial to the students who are in the workplace, students who are fresh out of school sometimes have issues with this style of learning. They often have the expectation of the "Sage on the Stage" that will teach to them and all they have to do is regurgitate in the right format. To alleviate these misconceptions, she communicates expectations early on in the semester:

> Sometimes it's important to point out that upfront that it's not going to work that way. I'm not going to sit up here and lecture to you – that's not the way this program works. The idea is to have an equal interchange of ideas with everybody. Again, I try to point that out explicitly so they don't say, "Well, what's up with this person, she's not teaching me anything."

It is not just war-stories and rants. There are many difficult questions that are posed. Louise has a lot of faith in her students and their ability to answer difficult questions with real-live, accurate advice. In fact, Louise believes that she often learns more from the students than the students learn from her.

The remainder of the case study looks at a set of posts that Louise chose to review as part of the study. For each post, the actual text of the post – as seen by the students in the blog – is followed by a brief deconstruction of the post. Louise ofren quotes her students or other sources in her posts; these quotes within the posts are indented twice.

First Post

> **Definitely Tough:** Everyone's done a great job attempting to answer this not-so-easy question. As many of you have indicated, at first glance, it appears that all of the Environmental factors involve extrinsic motivation, while all of the Personal Repertory factors involve intrinsic motivation. However, as you've also indicated, there may be external motivators that might impact the level of intrinsic motivation in the Personal Repertory. This brings up an interesting point. As Boyett & Boyett state in their article:

> If you take care of the problems with information, instruments, incentives, and knowledge, says Gilbert, you will fix many, if not most, of your motivational problems. It is a neat and elegant approach to managing and motivating people. Once more, it is an approach that works. Try it. We have. We swear by it. (p. 4)

So, extrinsic motivation on the part of someone else can alter an individual's intrinsic motivation. Is there ever a situation in which this is not a good thing?

There had been a lot of postings by the students commenting on how hard the topic had been, so Louise thought she should jump in and summarize for the good of the group. The summary she provides is meant to be a summary of the discussion to date, and is immediately followed by a question that keeps the discussion moving, but moving in a direction that Louise wants it to go.

Louise leads with some encouragement – letting everyone know that they are doing a good job with this difficult assignment. She then makes more connections between the course material and the discussion taking place.

Finally – to encourage the continuation of the discussion among the students, Louise posts a question that requires some thought. This post was followed by numerous thoughtful responses by the participants.

Second Post

BEM Order: Steve wrote:

> Gilbert's BEM model is excellent for identifying components that influence performance/motivation. Additionally, his prescribed order for addressing the various components clearly aligns with Danny's position. First, look at the environment and then look at the person. Most importantly, Gilbert points out that Motives should be left for last because it is most difficult (and possibly impossible) to change a person's internal motivation/attitudes/expectancies, which is why I agree with Danny's statement that motivation as an internal construct is of little or no use to those practicing HPT.

> Interestingly enough, there was an article written recently that suggests that Gilbert's recommended order of approach via the BEM should be changed. The reasoning is that changing knowledge generally requires training, and that training is the most expensive option of all. What does everyone think--does it make more sense to consider the knowledge box of the BEM last? I've attached a copy of the paper for those who are interested:

Louise posted this somewhat to ensure that she maintains a presence in the discussion. While someone else had answered this question earlier, Louise took the opportunity to add to the discussion and connect material from a prior class that some of the participants had taken to the current topic. For the students' convenience, she attached the actual article for everyone to read.

Louise quotes one student's post so that other students who start off by reading her posts are able to catch up and do not have to read the entire thread to find an obscure reference. She then summarizes a lot of the reading and challenges students to reflect on one particular component of the model being taught. However, knowing that there is a discrepancy between what this model says and what they are learning, she then focuses the students to consider changing the order of the model based on what they have learned?

After her post, the students agreed or disagreed to the change, and backed it up with life experiences and even some thought-provoking hypothetical questions. Louise quoted one of her students as saying: "Why do jobs and employers always want the people to conform to the job?" Another participant chimed in with experiences about extrinsic motivation in the military and how it was impossible to motivate everyone all of the time with extrinsic motivations.

Third Post

Choosing the Wrong Person: Jean wrote:

> Why do jobs/employers always want the people to conform to the job? Can't the job conform to the person? Or at least pick a person who has the "motivations/incentives" to want to do the job? I think most employers try to place everyone in a round hole when some of the people only fit in a square hole. Either the job is inflexible to change or they choose the wrong type of person from the start.
>
> Good point, Jean. The issue of choosing the wrong person for the job was one of Gilbert's beefs from the very beginning. When stated in the negative, he included "Select people for tasks they have intrinsic difficulties in performing" as one of the reasons for incompetence in the area of capacity.
>
> This brings up an interesting question. How would an employer go about screening for workers who have intrinsic motivation to do the job? Is it even possible?

In this post, Louise provides positive feedback to Jean, who has brought life experience to the group discussion and then immediately ties Jean's post to the course material. She highlights the key point of the article to focus the group of students on this one particular aspect. This is then followed by a direction to provide examples from their own experiences or theoretical ideas that might work. She does not provide her own example, and instead relies on the students to come up with ideas themselves.

> I don't really even have to show them because that's what they do, they say, "Yeah that's what I do at my workplace, here's what I did. Here's what worked and what didn't." That's what makes it so terrific to have this kind of a forum for them to be there and talk amongst themselves about that kind of thing.

Fourth Post

> **Good Point (8/25):** Jean wrote, regarding screening for intrinsic motivation:
>
> > I think it is possible with psychological, dexterity, value, cognitive etc...tests, but would it be legal? When does the issue of discrimination begin to come into play?? Maybe a person does not have the quickest mental ability or dexterity due to age! (that would be me) Would that be discrimination to not hire a person because of this?

> Jean, you make an excellent point. Although I'd put things like mental ability and dexterity into the BEM's capacity box and intrinsic motivation into the motives box, I'd imagine that this is something that would have to be dealt with very carefully. Does anyone else have experience with such issues and how best to deal with them?

In this post, Louise provides positive feedback to Jean and then turns to the group and asks if anyone has experiences that they could share. Again, this demonstrates how Louise chooses not to give the right answer, but instead to have the students bring their own ideas and experience to the table.

She also cautions them that this is an issue that is not simply academic – its one that needs to be dealt with very carefully. This highlights a key point of the discussion – that Human Resources groups deal with many complex and difficult situations above and beyond simple performance evaluation and development.

CASE STUDY TWO: MAYA

Introduction

Maya is an associate professor at a large university (> 20,000 students) where a small percent of university students are fully online. Maya teaches both face-to-face and online courses related to special education. She has been teaching online for about 5 years. A nationwide expert for online learning referred Maya for this study.

Course Overview

Maya chose to describe her facilitation of a graduate course in the Special Education department that focuses on helping special needs students transition out of school into the workplace and society. During the course, students conduct many activities in which they discover and explore services available to special needs adolescents.

The three-credit course follows a traditional 15-week semester schedule. The course is completely online and does not have any synchronous class meetings.

The section discussed has 20 students in it, though over 60 people tried to sign up for it. The students in the course are primarily located across the United States. The grade for the online discussions counts for 30% of the overall course grade and online discussions are considered to be critical to the success of the class. Online discussions take place every week throughout the semester. Assignments focus on individual practice and students communicate with Maya and each other via email during the individual practice. For the weeks that have online discussions, Maya posts one discussion question at the beginning of the week and the students can respond to the topic until the end of the week.

Becoming an Expert

Maya became an online facilitator because a group of universities taking part in a grant program had decided that the courses being developed during the grant should be delivered online. As one of the principal investigators on the grant, Maya agreed to develop and deliver online courses. The development of the courses took about 3 months and the online delivery began immediately.

The online courses developed in this grant were adaptations of existing courses that Maya had delivered for years in a traditional face-to-face format at the same university. Maya and others mapped out the course objectives and decided how to translate each course activity from a traditional activity to an online activity.

The transition was difficult. Maya had not intended to teach online and did not have any experience. Peers had counseled her that getting into online courses was very expensive and the grant she had received did not have lots of money for technology development. The university did not have established policies or procedures for online

courses so administrative delays cut into development time. To make the most of her time and resources, she paired up with her university's instructional design support team. Together, they scoured the available research and guidelines for developing effective online courses. Maya and others involved with the project sought out and received advice from colleagues who were teaching online at other schools. Based on what they learned, they structured the courses around effective online activities and built the courses to be delivered on a commercial course management system. Maya collected information that she would normally deliver during her lectures and put these into mini-web sites on the course management system. She has recently been experimenting with podcasts and video lectures.

Beliefs About Facilitation of Online Discussion

Maya started off using online discussions to verify that the students had completed the readings. This has evolved over the years to focus more on ensuring that the students are engaged with the content and with each other. She uses the discussions to integrate the information provided in the lectures, readings, and other course materials to the examples, questions, and statements that the students make. She is very aware of the time commitment for both the students and herself that is required to maintain a quality online discussion and tries to balance the number of discussions accordingly.

Maya sets clear expectations for her students regarding their participation in online discussions. She uses a simple rubric to evaluate the amount and quality of the student postings. Each student is required to post twice before the end of the week. In order for a post to be counted, the post needs to relate to the topic and add to the conversation. Simple “Oh, I agree with you” style posts are not counted. Maya describes what she is looking for in a post:

> ...it has to be that they have reflected and answered from either a professional or personal perspective and it reflects the content that we have been discussing for that week.

To communicate her grading strategies to her students, Maya completed and posted the rubric for each student in a private discussion between her and the student. For this section, she did this for the first three discussions and then just posted the grades for the rest of the discussions. This made it very clear to the students how they were being evaluated and set the expectations for the rest of the course.

Maya continuously improves her online facilitation by staying current with the research and collaborating with her peers. While she does return to get advice from the university's instructional design services group and turns to her new dean who is experienced with administrating online programs, her primary support comes from a small peer group. Two of her former doctoral students now teach online; the three of them get together periodically face-to-face and discuss online teaching strategies and try to solve specific problems. Maya described typical discussions with this group:

> "Here is the issue, here is the assignment I use to face to face, do you have a good idea of how to translate that online?" Or when we got some data that said that students really felt like the course was too time consuming, the threaded discussions, while they are excellent, they ate up so much of their time. So the three of us sort of problem solved to see how we could sort of mix it up a little bit.

Both Maya and her students believe that the online discussions are the most critical part of the course, but also realize that the time commitment is large. So large, in fact, that the students list online discussions as the most important, but most hated part of the course. Hence, Maya is actively reading and researching what others have done on this issue and is adjusting the amount that discussions are used accordingly.

In addition, Maya plans on tweaking how she provides feedback to the students. The practice of posting completed rubrics for every student was effective, but extremely

time consuming. Since she stopped posting the rubric every week after the third discussion, she noticed that the students were not understanding the grading rubric later in the course. Hence, she will try providing the rubric occasionally throughout the semester instead of just for the first three weeks.

Facilitating Online Discussions

Maya's discussions typically contain around 200 posts per week. Of the 200, Maya posts approximately 1/3 (or about 65 posts) of the messages. She spends between 3 and 5 hours per week on the discussion threads. She typically reads through the discussion and chooses where to post based on the discussion progress; she does not typically respond to every post.

Participation varies among the students. Maya explains:

> There is always the "good group", the group that seems to engage more, who are more conscientious, then you have the "lurkers", who aren't always quite [active]… they are the ones who are sitting in the back of the room anyways.

She understands that her students will read her posts, but might not read the posts of other students. Hence, she often includes segments of student postings in her posts and composes her posts with the understanding that the students may only be reading hers.

Maya has some key concepts and topics in mind when teaching a course. When these topics arise in students' discussions – or if they are completely absent – Maya will take the opportunity to post a message to reinforce the topic.

> usually for each weeks session I have some issues that I want to be addressed. So, if I see that someone is addressing them or is partially addressing them, or is not addressing them, then I will try to promote that in the discussion.

Maya described five of her posts in one discussion thread for this study.

First Post

> I don't know if you've had the chance to view the videotape of Bart... oh no, of course not, your packet didn't come!! You'd understand the severity of Bart's physical disability and how this level of support is critical to his daily life.
>
> I mentioned in my reply to Beverly that while Bart does have informal supports that make some folks nervous, they do seem dependable, whereas his one formal and paid for supports is the least likely to show up for work! Interesting perspective, don't you think? Those that are his friends are the dependable ones and those that are paid to support him aren't... what do you think that says about the types of services and supports provided to others with disabilities? which woudl you want to be surrounded by?

Maya felt that Beverly was making a judgment without having all of the proper information. Hence, she was trying to let Beverly (and others) know that they should not be quick to pass judgment on special needs children without getting all of the data first. Towards the individual, she is pushing Beverly to think before making judgment. To the group, she is trying to shift their values on this particular topic:

> [I'm trying to] help students shift their values about what kind of support individuals with disabilities have. So, it's kind of value-laden…it always leads to really great discussions.

She connects the discussion to a particular video that is part of the course materials and directs the students to review a particular component of the video. She also makes a connection to a previous post that she had made in the same discussion.

A key point had arisen – that the least reliable support that the severely disabled individual received was not from paid support. Maya highlighted this in the discussion to be sure that the students understood the importance.

At the end of the post, Maya encourages further discussion by formulating a question that forces the students to think further about this very important key point. She

asks the students to put themselves in the place of the disabled individual and decide what they would want for themselves.

> [I try to] get them to think about someone with a disability other than having a disability, so putting it on them in terms of, "If you were Bart, how would you want to live?" You know, if that was them, still trying to get them to do some sort of values clarification. So, what would you want in your life? You know, you don't have a disability, but how would you want to be treated and what would you want in your life. So again, getting them to self-reflect it.

The question sparked significant number of responses from the students. The responses were more reflective and analytical and less "knee-jerk." The second post from this discussion was a follow-up to this discussion.

Second Post

> I agree re: the turn over among paid staff... you know it reminds me of a quote from Diane Ferguson, a researcher in special education and a parent of an (now) adult with significant disabilities.. she says (and I paraphrase) that what she wants for her son is to be surrounded by caring neighbors and friends... that the more hands to catch him the better, and this means he needs to be out in his community... I'll try to find the actual quote, it's very powerful!

In this post, Maya first provides positive feedback to Beverly, who Maya had corrected publicly in an earlier post.

> ...to support that student, cause I have sort of, if you ask that student to evaluate this, she could easily say, "well that instructor was kind of picking on me."...I was basically pushing her. So, I wanted to agree with her, whatever point she was making.

She then adds new information – information that is not in any of the course materials, but is based on her personal research experience – to the discussion. The new information provides additional focus on the key topic that Maya had highlighted in her prior post.

> So here is where I think that threaded discussions are so important, is that I can bring in my knowledge that they are not getting from the reading, or the other lectures or activities that they are involved in

However, Maya continues to use an informal tone. She specifically does not use formal references such as “Ferguson and Ferguson (1999) said...”

Third Post

> exactly the point.. it's not so different than the life you would want... or have at the moment! We don't think about it as "unstable" (or maybe we do...) because we are w/o disabilities (or the extensive disabilities that Bart has). It's two different perspectives, one for those w/o disabilities and one for those with... the point of this week's session is to open eyes to the importance of having a single vision for everyone in our community, and also, what is possible (e.g., having individualized supports) even if they are not yet available in your community.

Again, Maya leads with encouraging words to the discussion participants. She clarifies another important point of perspective – someone without disabilities will not have the same perspective as someone who does – and explicitly reiterates the point of the discussion and makes her values on this subject clear to the group.

Fourth Post

> Interesting and insightful... we tend to see the disability first and make assumptions about the person's capabilities, don't we. I like your perspective of reading his story first THEN seeing him "in person" I should make that the requirement next time... it does do a bit of a values check for each of us doesn't it?

Like the previous two posts, Maya leads with encouraging words and reiterates the primary values and concepts of the discussion. She ends it with a question that was intended to encourage additional thought and participation.

Overall, the series of posts successfully changed the one student's perspective on this disabled individual.

> I was responding to the fact that she didn’t see the disability first. But even though, then she did see what his appearance was, she stuck to her original post, which was basically, “He reminds me of me.” “That’s how I run my life,” or whatever. Her response was who he is as a person, rather than as a disability.

Fourth Post

"excellent point Leti" This was a very short and simple encouragement directed at a student who had been anxious about the technology mediated program. In Maya's words:

> In this case, this particular student was very anxious about technology, and using technology, and being online, and didn't think she could do it. In fact, she is a local student who was going to drop the class early on, because she didn't think she could do it. So…I was reinforcing her, just for getting online and posting, and letting her know that I was there and reading it. I probably wouldn't have responded if it was somebody else.

This was one of many encouraging posts that Maya provided to Leti. Leti stayed in the class and became an active participant in the online discussions.

Fifth Post

> Betty, think about how fragile are the supports [that] surround so many people, disabled or not. So yes, I agree that there are concerns about if his support system changes.. but what do you think his friends will do, will they just not show up one day? Probably not, they will most likely talk it over with him and find others to help out... what about the agency staff? Will they do this level of triage to ensure that Bart's needs are met? Most likely not. And the waitress? If she leaves what do you think Bart will do? Probably find another at that restaurant or go somewhere else. I'm not dismissing your concerns, because they are real, but we have to give credit to Bart for figuring it out on his own and again, think about what his individual needs are and support this, rather than trying to force him into the menu of options available from an agency... which is the typical way that people with disabilities are supported... I call it the disability menu - "You can have this or this and that's all... we don't provide substitutions"

This message is directed at an individual, but is intended to inform the entire group. Maya provides a rebuttal to show Betty and the rest of the group the other side of the story. She also provides a metaphor to let participants relate to the topic more easily.

The rebuttal is written carefully – as not to offend or discourage the student. Maya is trying to help the student see the counter argument without expressly telling the student

that the student is “off base." The point is not that the student is wrong and Maya is right, it’s that there are other perspectives on this topic.

CASE STUDY THREE: RICK

Introduction

Rick is a professor and assistant dean at a medical branch of a university system. The branch has less than 2,000 students. While the majority of courses that the branch students take are face-to-face, some of the faculty, including Rick, teach online courses as part of a university system-wide collaborative. Rick teaches both face-to-face and online courses related to educational and medical research as well as educational technology. He has been teaching online for about 10 years and actively publishes research on educational technology and clinical simulations.

A nationwide expert for online learning referred Rick for this study.

Course Overview

For this study, Rick chose to describe his facilitation of a graduate course in the Biomedical Science School in collaboration with another university's online Masters in Educational Technology program. This course focuses on teaching students the basics of educational research. Students learn the fundamentals, then practice designing research studies.

The three-credit graduate course follows a traditional 16-week semester schedule. The course is completely online, but does have weekly synchronous meetings via chat with live one-way video and audio.

The section discussed has eight students in it; sections typically have between 10-30 students. The students in the course are located across the state. The grade for the online discussions counts for only 10% of the grade, but online discussions are

considered to be critical to the success of the class. Online discussions take place continuously via email throughout the semester, but only three weeks are focused on particular topics. For the topic-focused discussions, Rick starts the discussion with a single topic posted via a listserve. The students all respond to the group via either an email listserve when the class is less than 10 students or a discussion board when the class is larger.

Becoming an Expert

Rick has been involved with technology and education for nearly 40 years. His work has included email, web, television, and a number of other media. Starting as a computer programmer in 1966, he has been a pioneer in education technology trying many new technologies along the way including developing clinical patient simulations for the purposes of training health professionals. At one point, he was leading the Education Technology group at the school. He got started with Internet-based courses over 10 years ago when email was the only real option. Since he had taught mostly project-based courses where students focused more on their own learning instead of through lectures, the transition to the asynchronous distance education model was simple for Rick.

For most of the time teaching online, Rick has worked closely with one other professor at the same branch. The two of them have tried a number of different technologies over the years and continuously look for new ideas. Currently, they are experimenting with live question and answer – like a talk radio show – where the students can send in questions via chat, and Rick and his colleague respond via live video broadcast from Rick's office.

Beliefs about Facilitation of Online Discussion

Because the course is focused on learning through project-based experience, Rick uses asynchronous discussions to support the individual learning. He uses online discussions for the activities that are best suited for group participation, such as brainstorming or refining new ideas. Rick facilitates other discussions to guide and shape the way that his students think about the course subjects. Instead of working one-on-one with the student via email, he extends the question/answer model by replying to individual questions with answers that are fit for the group. As a rule, Rick responds to every single message that his students send.

Rick uses the online discussion to model correct behavior. He hopes that the students begin to follow his thought process and begin to think like a researcher:

> This isn't a matter of memorizing a bunch of stuff, it's really learning to think in a certain kind of way and all the assignments in the course are really designed to run them through the research process and learn about how to think like a researcher.
>
> And my second goal is to role model where they are supposed to be thought-process wise. I wanted to share that with the whole group.

Rick measures success in the online discussions by how well his students share thoughtful advice with each other. This advice may include personal experiences or additional resources available on the Internet that could help fellow students.

Rick understands that the participants will read his messages, and leverages these general responses to the group (in response to questions posed by individual students) to make sure that the students actually read the wisdom being shared. He sees this as one advantage of using email over threaded emails.

> And they actually read the e-mail when you send it to them and they don't necessarily read stuff on the website so posting gems of insight on the website doesn't necessarily always get anybody to read it.

While he believes that the email communications are effective, he does not believe that they are as rich or effective as face-to-face discussions:

> I think e-mail is fairly effective. These students are all pretty practiced at communicating via e-mail and so you can send them web links, they can get to it and things so yea I think it communicates fairly well. It's never as good as actually talking to someone face to face for a couple of moments.

He is experimenting with other forms of communication, such as two-way and conference audio to address this belief.

Facilitating Online Discussions

Rick's discussions typically contain around 50 messages per week for this small section. For larger sections, the number of messages increases roughly linearly with the size of the course. Rick spends about five hours per week reading and responding to the messages. Because he responds to every single message, he contributes half of the messages in a discussion.

Rick reads through all of the student posts early in the morning, and then responds to each one individually in order of difficulty. Rick tackles the immediate need technical/operational questions first with short responses, and then composes responses to the more difficult messages. Throughout the rest of the day until he stops reading in the evening, Rick responds to the messages as they come in. Since Rick does most of his work via email, this process is just part of his normal workflow. When composing the message, Rick responds quickly and posts the response after checking the message for grammar and spelling errors.

The remainder of the case study looks at a set of posts that Rick chose to review as part of the study. For each post, the actual text of the post – as seen by the students in the blog – is followed by a brief deconstruction of the post.

First Post

> Richard,
>
> Thanks for the update.
>
> Get your categories for the IV established now. It will help if you keep in your mind that you are comparing reading programs with the intent (hypothesis) that the Accelerated Reader program will increase reading skills more than some other reading program. Thus, call the IV Reading Program Used. The IV has two (at least) categories 1) students who use the Accelerated Reader program, and 2) students who use the standard reading program (or whatever it is).
>
> For the DV, decide now what reading comprehension test you will use, what sub-tests, and what the actual scores are. Is it a percentile, numerical scores from 1 to 100, a grade level, what? You want to start thinking in terms of what you are measuring. You are measuring scores on a test and those scores imply reading abilities depending on the validity of the test. You are not measuring reading abilities, your are measuring performance on a test that infers reading ability. Talk now in terms of the measurement, not the inference.
>
> Coming along nicely.
>
> Rick

This message was one in a series of messages that supported a project that required students to write research proposals. Students had been struggling with the concepts of independent and dependent variables and how to translate the concepts to real-world application. The student to which Rick is responding has just posted his research plan, and has not fully comprehended the concepts of independent and dependent variables, nor has captured effective measures for the concepts. Rick responds with the purpose of setting the individual straight as well as using the exchange as a teaching moment for all of the students. Rick leads with a short affirmation, then begins to model how he thinks about these issues. The student has made a common mistake in

confusing the item being studied (Accelerated Reader) and the name of the independent variable (IV). Rick models the naming of the categories and IV from the program that is to be studied and highlights the key point that the IV in a research project must have two or more categories. Historically, this confusion is common, so Rick shares this response to the whole group. In Rick's words:

> I'm trying to get them off the mark of what they tend to always want do - is give their variable a conceptual name and call it that [name] forever. And sometimes it never gets translated clearly into an operational definition. So I'm trying to encourage him to start thinking in terms of the categories, what are the categories. What are the categories? You know you've got an accelerated reader program, what is it you want to do with that? Do you want to compare it to something else? What else do you want to compare it to?

The second paragraph follows a similar pattern of addressing common misconceptions and mistakes. He reminds the student, and hence all participants, that you don't really measure reading ability, you are measuring impact on indicators of reading ability. This seemingly minor point is a key concept in the course. Like the first paragraph, he models the thinking steps for the students.

Finally, even though Rick has corrected the student on some basic concepts, Rick provides some encouragement in the last statement.

Second Post

> Kevin,
>
> No, this is OK. It is very non-specific. Why not say, In middle school grades, females will have higher scores on the TAKS mathematics sub-tests than males.
>
> Rick

Rick posted this short response to guide this student's – as well as the other students' – ability to address measurable categories. The "No, this is ok." at the beginning is in direct response to the student's direct question "Am I reaching?" - and

provides a little bit of encouragement. The student has proposed language that is too broad and worded as a cause-and-effect, when the actual question is more of a correlation and needs to have a hypothesis. Rick models the next step of the process.

Rick understands that the student is quizzical, and not confident about this process. Though Rick does not know much about the student at all, Rick understands that the student is not confident because of his prior posts and that the student may feel silly about the topic since it directly contradicts a prior post from the same student. The student had included an emoticon that reinforced this assumption.

The student revised his proposal properly and was successful in the project.

Third Post

> Tammy,
>
> Your IV needs to be more complete. What it is depends on what you want to know. Do you want to compare PDAs with laptops? Compare PDA usage
> against not having a PDA? You need something specific.
>
> DV: Using a PDA is unlikely to improve overall academic achievement. I would select a more focused criterion based on the nature of the tasks that the PDA is being used with.
>
> For example: Suppose I wanted to see if using PDAs could improve the amount of home work completed on time by sixth grade students. I could have two groups, one class with Bluetooth enabled PDAs and the other group a parallel class without access to PDAs. The PDA class would download a daily calendar with all their homework assignments via the Bluetooth interface. The non-PDA class would copy their homework off the
> board, as usual (or do whatever is usual). Records would be kept of two variables: percentage of homework completeness each day and percentage of homework (complete or not) turned in on time. I would gather this data for a whole year to let the novelty of the PDA wear off. I would hypothesize that the PDA group would have higher average percentages on
> both variables than the non-PDA group.

Rick

Rick had discussed this particular question at length during the synchronous chat the night before. Hence, he jumps right in to give Theresa some feedback on her proposal. His purpose for this post was to get her to think more concretely about the task at hand.

He provides specific feedback on what is missing from her IV, and asks her to be more specific – and that the effects she is looking for can only be found when you compare it to something. In the second paragraph, he directs her to focus her study on something more plausible than overall student achievement.

As before, Rick then provides a detailed modeling of the thought process an expert takes to clearly define independent and dependent variables for a similar topic. He includes the basics, as well as some other gems of wisdom such as advising that the data is collected a full year so the novelty of the technology wears off.

This student successfully revised her proposal.

Fourth Post

Cami,

Thanks.

> The purpose of the References is to enable others to find your original source, so the rule is to supply the best information possible. If it's a web site give the URL. It is on the UCF web site so you could put UCF in the reference. It's not really published as a journal article is, but since it's on a web site, I'd leave out the unpublished manuscript statement.

Rick

In this response, Rick is clarifying to the group general policies for using and referencing knowledge found on the Internet and other locations. He helps out this student with the specific response and generalizes the response to a larger group and larger space.

CASE STUDY FOUR: CASEY

Introduction

Casey is a lecturer at a large university (>20,000 students). Casey teaches both face-to-face and online courses related to criminal justice. She has been teaching online for about 9 years.

A nationwide expert for online learning referred Casey for this study.

Course Overview

For this study, Casey chose to describe her facilitation of a senior level course in the Criminology School focused on the Judicial System. Most of the students are seniors in the online program offered through the consortium. On average, the students in the online programs appear to be more committed, and of the 12 graduating this year, half are graduating with cum laude honors or better. In fact, some on-campus students drop the online course since it is much more demanding than the on campus course.

The three-credit course follows a traditional 15-week semester schedule. The course is completely online and does not have any synchronous class meetings.

The section that is discussed has 27 students in it; classes are capped at 30 students but sometimes get as large as 35. The grade for the 12 online discussions counts for roughly 48% of the grade and online discussions are considered to be critical to the success of the class. Online discussions take place nearly ever week throughout the semester.

Casey never meets with the students face-to-face, but as an advisor to the overall program, she does talk to some students in that advisor role.

Becoming an Expert

Casey got started teaching online to help out a few students. About 10 years ago, two students she knew well were not able to schedule a pair of required classes in order to graduate on time. The two students asked Casey to teach one of the required courses in order to let them graduate on time. Eight other students, who were not enthusiastic about the quality of the forthcoming course, asked to join the new section. Casey agreed to teach the course to the ten students, but only if the students were willing to be guinea pigs for an online course. She even had the students formally agree to be part of an experimental course, where Casey could change direction, syllabus, or teaching models at any time in order to do the best course she could in the new medium. Casey had already been one of the only faculty to make use of computer labs built by the university to this point, and always was looking for ways to integrate technology into her teaching.

For this pilot course, Casey had to both figure out the online component as well as the content; she had not taught the face-to-face course at that time. However, she very much enjoyed the experience and has been teaching online ever since.

> And it turned out, I mean there were many things along the way that I changed during the semester, but I became hooked on the subject and hooked with the idea of teaching it online.

Casey taught an increasing number of online courses over the next few years, and eventually joined a consortium that was offering a fully online degree. Because of her online experience, the consortium waived the requirement to be a tenure track professor and allowed her to teach. The courses Casey teaches now are part of this consortium.

In the early days, there was very little interaction among students. Most of the interaction was between the teacher and the student, and the online course management

system was used to list course materials and accept assignments and grading. In one of Casey's first courses, a chapter on Islamic law in the course textbook was less than adequate, and Casey started the practice of searching out and sharing quality links. The effect of this integration of Internet resources, her knowledge, and the course materials was well received by the students. In later courses, where students had a choice of using regular textbooks or e-books that allowed for digital annotations, she observed that students who used the e-books showed better understanding of the course material.

When she was teaching both on-campus and online students, Casey required her on-campus students to participate in some discussions online. The on-campus students resisted this, eventually driving Casey to stop teaching on-campus classes altogether.

The transition for students who had taken courses from Casey in the past as face-to-face students wasn't always without a wrinkle:

> one of the students made an observation that I would then think of and eventually incorporate, we didn't really have the technology at the time, and she said that the thing that she really missed was when she was in my classroom, that my voice would fluctuate and she was immediately know what was going to be on the test by the emphasis that I put on it in talking about it.

Casey tried to transfer this emphasis at first using text, and eventually has moved to using lectures stored as audio files. As far as the examinations, she finds that the online exams are better since they do not eat up valuable course time if the exams are taken online.

Casey continues to improve her knowledge about online learning, reading everything she can find on the subject and attending conferences regularly. She pays close attention to the evaluations she receives at the middle and end of each course about how she is teaching the course, the technologies involved (listserve, blog, course management system), and the types of media she is using (text, podcast). Casey makes

adjustments based on what she learns. Her students provide honest and open feedback on the course during the course, Also, Casey has taken two Quality Matters courses on the subject; Quality Matters is a consortium based in Maryland that focuses on helping faculty continuously improve their own online courses. Casey shares her knowledge with others and has published articles in non-peer reviewed publications.

Beliefs about Facilitation of Online Discussion

Casey believes that the word "facilitate" is key when managing online discussions. She presents the topic in the form of an article, and then lets the discussion begin. She interjects in the discussion only if something needs correction, clarification, or if something offensive has been posted. When she interjects, she sometimes shares new knowledge and personal experiences and opinions to show that she is participating, and not necessarily driving the discussion. However, the students always know she is watching the discussion closely since she sends private emails to the students regarding their participation. When the discussion goes on a tangent, she sends an email to everyone in the group to refocus the discussion, instead of posting it directly to the blog If the discussion gets too controversial or completely off-topic, she interjects forcefully, and seals off the discussion immediately. This is respected by her students:

> …a comment from me "we're not discussing this anymore," shuts it off immediately. And, in fact, not in this particular class, but I did have one occasion where I wanted something cut off and the student has posted right before and sent me a note apologizing. Saying, "Oh, I didn't read it until after I sent what I had posted and I am so sorry" …. they are aware of the fact that I am still the one in charge of the grades. Don't make me unhappy.

Casey wants her students to develop strong analytical skills; hence she is very careful not to just tell the students what to think. When she posts an article to discuss, she

requires the students to each decide on how they want to approach the article. She does not post a guiding question.

She believes that this is great medium, especially for the context of this course. The students learn quite a bit from each other's real-world experience and are much more willing to share their difficult and personal knowledge.

> I will say, as an overall commentary that they share much, much more online than they ever would share in the classroom...The amount of personal information, things that happened to them as abused wives, as abused children, as victims, where they have relatives that are imprisoned. You just would not get that kind of information in a classroom. I never did.

She attributes this willingness somewhat to the cloak of anonymity provided by the fact that nobody is looking at the student when the student is typing in their experience; there is no body language or immediate reaction (e.g. "Nobody raising an eyebrow") from their peers so the student can keep on writing.

Casey respects the experience that her students have. Many of her students work in the criminal justice system – including border guards, air marshals, and correctional facilities staff – and have many personal anecdotes to share with the class. However, she also respects that not everyone is willing to share their experience; she allows her students to make a choice if they do or do not want to share personal experiences. Casey reads every message in the discussion and grades the students' messages based on a rubric. The rubric has five parts: 1) use of outside resources, 2) quality of their in-depth analysis, 3) responding to at least three of their classmates with quality messages (as opposed to just responding to one of her posts), 4) general quality of their posts, and 5) their use of the English language, including grammar and spelling.

In the private messages to the students, she sends corrections, explanations, clarifications, or other types of complimentary or constructive criticisms. Some students

contact her via instant messenger and email; she is very prompt about responding to these direct requests. She receives and responds to about 10 private messages a day from her students in this one section.

For the online discussion, she uses a blogging system that allows a number of people to post messages. She finds the blogs to be easier to read than the online discussions since the access is immediate and there are no confusing menus and hierarchies to sift through. On the other hand, she is somewhat concerned since the blogs are open to the public if someone chooses to read them. Also, it's sometimes tough to see to whom a person has responded in a blog. She relies on the students to sign their own name to their blog entries since that is not automatically added. Each time the blog is updated, Casey receives an email reminding her to check the blog. She grades the posts and enters the score into her gradebook on her local computer.

The discussions start on Sunday and end on Friday at midnight. She initiates the discussion by posting one (or sometimes two) articles. Casey does not post a guiding question; she expects the students to use their own lenses on the article and to share their perspectives with the class. She chose these dates to ensure that she has Sunday to relax and spend with her family. The students are required to post at least one message between the time that the article is posted on Sunday and Tuesday evening and are required to respond to three or more of their peers before Friday at midnight. She finds that very few, maybe 1% of her students respond to her posts directly, but many of them reference the material she shares when the students are making arguments for their case.

Each week's blog has between 100 and 140 entries; only about 5% of the entries are hers.

She believes that online courses are a great way to teach, and she gets great feedback from her students from the evaluations and even after the course is over.

The remainder of the case study looks at a set of posts that Casey chose to review as part of the study. For each post, the actual text of the post – as seen by the students in the blog – is followed by a brief deconstruction of the post.

First Post

> Prosecutors have commented that jurors expect to hear from eye witnesses (the most unreliable evidence there is), forensic experts, and all kinds of "CSI" material; this is the way it works on television. There was a time when jurors expected the guilty person to rise during the trial and confess because that was how it was done on Perry Mason. Law and Order is a series that I personally enjoy because it brings out dramatically the legal obstancles[sic] that often must be overcome and the unreliability (in terms of knowing the outcome) of a jury verdict. Some people believe anything that they see or hear especially from a tv "talking head," my term for those who claim the ability to explain everything and anything up to and including what the jury will decide or should decide. But television also serves to educate citizens about the working of a trial. Many jurisdictions are not only allowing jurors to take notes but also to send the judge a note requesting that a witness be asked about X,Y, or Z. (The judge confers with counsel on both sides and decides whether to ask the witness or not.)The average jury has people with a wide variety of IQs as well as a wide variety of education. Thus it is difficult to define terms for understandability to one and all. Today many judges used jury instructions that have passed muster (been present in a case on appeal without the appeals court having faulted the instructions). For the most part these instructions include definitions of terms such as resonable[sic] doubt and mitigating factors, for example. Jurors are also told that if you believe that a witness spoke untruthfully in answer to a question, you can decide to give no attention to anything the witness said --(falsus in uno, falsus in omnibus -- roughly a lie about one thing can often mean lies about everything)While some agree with Professor Emerson who I believe was the person stating she would not watch CSI, others in the same field enjoy seeing technology that may be just over the horizon. Most departments do not have the budget to do extensive forensic evidence collection and testing but in major felonies will call upon the state police and even federal authorities for assistance with collection and testing. Professor Smith 4301

In this case, Casey observed that the students were not looking at the full picture in their discussion. Hence, she posted a summary of the issue based on her personal

knowledge. The summary also makes reference to another professors course, since one of the students had already referenced it.

> Primarily reading what they had been writing about, we were discussing eyewitness testimony and mistakes that are made, exonerations. And I really felt that they weren't looking at the full picture. And so I wanted to let them see that prosecutors were having to deal with expectations that were coming from the media, from people watching CSI, that the juror pool had literally been conditioned by these programs to expect eyewitness testimony, to expect fingerprint evidence and totally unaware of the fact that the worst of all evidence, is eyewitness, it's the most unreliable. And so I just felt that while TV plays an enormous role in educating the public and obviously jurors are the public, it also does a disservice.

The knowledge she shares here is not from the textbook; she relies on the students to complete the readings. Casey generally shares knowledge like this when the knowledge is not explicitly found in one of the course materials.

Second Post

> Let me interject some comments here. Each state sets its own protocol and while this particular judge wants things done a certain way will not have any impact on what other states do. It is the job of the Attorney General in each state to establish the way a law is executed and in this instance the method used in death penalty cases. Those who have watched executions, one friend who is a defense attorney was requested as a witness by her client, state that from the initial injection until the pronouncement BY A DOCTOR that a person is dead is less than 10 minutes. Ten minutes can seem an eternity, but these witnesses also report that the person appears asleep and then breathing stops. According to information that I have seen, sodium pentathol[sic] is given initially in [this state] which is similar to the first used when you undergo surgery. The newspaper article would obviously select those that did not work smoothly. The electric chair is much more painful and often did not work properly. Any method chosen for execution is going to have negative aspects. Let's stop the debate over how painful this is or is not. None of us are trained in this area and pain is a relative thing. Some people are more pain sensitive than others. I think we need a change of direction. Discussion questions to be:1) Should judge, legislature, or public by referendum decide on the method of execution to be used in a state that has the death penalty?2) Comparing homicide statistics before and after a state uses or stops using the death

> penalty does it appear that use of the death penalty acts as a deterrence -- obviously it is a specific deterrence since the dead cannot commit another crime.3) The death penalty was used when the Constitution was ratified. The cruel and unusual phrase has not been held to refer to the death penalty. Let's instead consider which acts should be classified as death eligible. When the Supreme Court stopped the death penalty in the 1970s, it was the arbitrary manner in which it was used not the process itself. Once states established which crimes were death eligible, the penalty was reinstated in some states. You may address any or all of these three questions but subject of doctor's presence is now off limits and so is whether process is ultra painful. Professor Smith

The discussion was about the necessity of having a doctor present to pronounce the inmate dead after a lethal injection is delivered. The discussion had shifted away from the main topic and had moved towards discussion comparing the suffering of the criminal vs. the suffering of the original victim. Since this was not a useful direction related to the course objectives, and a dangerous area to be discussing in an academic setting, Casey redirected the discussion by summarizing parts of the discussion and laying out three eligible questions for the group to discuss. She also clearly stated that no further discussion on the prior topic was allowed. The students respect her directives and continued the discussion along the lines she had suggested.

Third Post

> In answer to the question of privatization, while anything is possible, I believe this would not be allowed. I find it hard to even think of why it would be considered. We have enough mixed emotions about whether or not to have a death penalty. If a state decides to use execution, then it is the state that must carry it out. Privatization of prisons is already a quagmire and many feel that it should not be allowed at all. I have "enjoyed" the discussion since I too am a fence sitter on this one. What I find interesting is that if you put many of these people into the general population of a prison, the prisoners would find a way to execute them. So in a sense putting a person on death row is isolating them from the other prisoners who might wish to take the "law" into their own hands. I doubt that there will ever be a right answer. I also doubt that I will ever use this topic again for participation. I truly respect the way those on both sides of

> the fence have presented their own views while accepting that others may disagree.

This discussion had been about privatization in the prison systems, and someone had suggested that the death penalty could be privatized. Casey felt that the discussion needed some extra information about the limitations and legal issues surrounding privatization. She also seals up this discussion by reflecting on her experience with the discussion and where she sits relative to the topic ("on the fence.") From Casey's experience with this discussion, she has decided that the death penalty discussion was too painful for some of her participants and she was not going to use this topic again.

This effectively ended the discussion and the students moved onto another topic.

Fourth Post

> It is THE LAW IN [THIS STATE] that both child and elder abuse MUST BE REPORTED. You can be prosecuted for endangering the life of a child or an elder in [this state].I have seen ads placed for interested individuals to serve in the role of omnibudsman. An omnibudsman represents the interests of the elderly or consumers or children or whomever the omnibudperson is appointed to protect. If someone knows something and does not report abuse to children or the elderly, it is not only illegal but immoral as well. I worked prior to coming to [this college] as a consumer advocate and even back then we were providing information regarding whom to report suspicions of spousal abuse, child abuse, etc. to and how to do it. I learned that this type of abuse cuts across all socioeconomic levels and all races and religions. Did any of you see that an inmate who was imprisoned for raping and killing a child was branded by other inmates on his forehead with the words Kathy's Revenge? Professor Smith

In this case, the discussion seemed to be lacking critical information about the law, and students were basing their discussions on incorrect assumptions.

> I had just read where they were going in general and felt that they weren't aware of the law in [this state] and that they needed to, it was just general commentary really. Primarily because I just didn't think they were aware that there was a law in [this state].

As a participant, and not just the facilitator, Casey shares some of her personal feelings and experiences in this post as well. Students responded well to her sharing, and responded to this topic immediately with many quality responses.

CASE STUDY FIVE: JENNIFER

Introduction

Jennifer is a professor at a medium-sized university (10-20,000 students) where a small percent of university students are fully online. Jennifer teaches both face-to-face and online courses related to business. Jennifer is an associate dean at the college so this course is just one of two that she teaches. The other course is a face-to-face doctoral seminar. However, she is the only person in her department that is teaching an online course. She has been teaching online for about 10 years. A nationwide expert for online learning referred Jennifer for this study.

Course Overview

For this study, Jennifer chose to describe her facilitation of a graduate course titled "Leadership and Organizational Change" in the business school for first-year MBA students. The three-credit course follows a traditional 16-week semester schedule. The course is completely online and does not have any synchronous class meetings. The current section of this course has 67 students in it; the students in the course are located across the state and are part of a multi-university consortium. The program requires that each of the sections have more than 50 students. The university intended for online programs to scale to very large ratios. The grade for the online discussions counts for 20% of the overall course grade, and the online discussions are considered to be critical to the success of the class. The remainder of the grade is dependent on team projects and traditional exams. Online discussions take place every week throughout the semester.

Jennifer posts one discussion question at the beginning of the week and the students can respond to the topic until the end of the week.

Students taking the class are experienced online students and are accustomed to online discussions. However, the students generally do not know each other since the program is not a cohort model.

Becoming an Expert

Jennifer became an online facilitator after a challenge was posed to the faculty at their school in 1997. The challenge asked for volunteers to create two courses for a new online MBA program offered by a consortium of smaller universities. Jennifer and three other faculty members created the first online course in the program.

This first course was difficult to write; online education was a very new field and the team struggled to design and develop effective ways of translating "touchy-feely" face-to-face experiences to an environment where nobody can see each other. The loss of the facial expressions and tone of voice were seen as being difficult obstacles to overcome. The team had some support from the consortium, but since the concept was so new for everyone, the team spent a lot of time brainstorming ideas and figuring out what to do on their own.

One of the first changes they made was to the tone and formality of the course materials, The team switched the formal tone which one might expect from a textbook to a much more informal, friendly tone full of anecdotes and personal experiences. They divided the work among the four members and each member created the course materials – intended to replace the need for a textbook – for the course.

The initial courses relied on both email and asynchronous discussions. Jennifer, even from the beginning, believed that online courses should always be asynchronous. She did not – and still does not - use any synchronous events in her classes.

A similar team created the second course in the series. Since then, Jennifer has now taken over both courses and has redesigned the content. Over the years, she has made changes to her course and teaching style numerous times based on student feedback. She reinvests what she learns at conferences and from her own experience into her courses each year. For example, she has been able to adjust her workload to a point where she can manage a very large course of 67 students within a very reasonable amount of time. These adjustments came after conversations with many colleagues and from trying new things in her courses.

Jennifer really enjoys the online environment and wishes that more of her colleagues would join her in really digging into the courses and experiencing the richness of the online communication.

> There is so much more going on in these on-line classes…. That's the tragedy about the faculty who won't get involved with the content, who won't get involved with the interactions and the students. They are missing out on all of that.

Beliefs about Facilitation of Online Discussion

Jennifer expects her students to express a higher level of thinking in the online discussions than she would expect in a face-to-face class. For the MBA program, she expects her students to think critically about the course content as well as each other's opinions. She uses the discussions to ensure her students understand that there are many points of view for any given subject and that the students must see topics from someone else's perspective.

To measure these expectations, Jennifer assigns points to students' contribution to the whole-class discussion and students peer-review each other within their student teams (5-7 students each) using a rubric she has provided. The peer review is weighted equally to her score; the review relies heavily on asking students which of their team members

that they would like to remove from the team. However, Jennifer does not use a formal rubric for her whole-class discussion. Jennifer relies heavily on student-student interaction within the student teams that work on projects and contribute to the class-wide discussions. She believes that all of the students must participate in their group, but does not require each student to participate in the larger, all-class discussions. The class and the teams discuss the same topics; the teams may have additional topics on their own that they want to discuss.

In her discussions, Jennifer finds that students are more apt to open up and share personal experiences. Because the medium allows students to finish their thoughts without being interrupted by an aggressive student – common in MBA programs – or sidelined by indignant looks from other students, she finds that students take the time to share well thought out posits, and personal experiences. Even though Jennifer has almost 70 students, she feels that she gets to know many of her students.

> Yea, that's what's really cool about on-line too, is that we are much more sensitive to the individual personalities and the on-line environment than we are in the face-to-face environment. Because in a face-to-face class, if you can see the person or hear the person then you automatically create an image, you can't, I mean you can't keep from doing that. … In on-line what we become sensitive to are the words that we use. We become far better communicators than we were or than we are in the face to face [classes].

She also expects the teams to develop functional people and communication skills. She does not let teams "fire" anyone. If there is a problem student or poor relationship, the team is expected to work out these differences on their own and to maintain their team's effectiveness.

Facilitating Online Discussions

Jennifer distributes the weekly discussion among her class using a team model. Each student is assigned to a team of 5-7 students for the duration of the course. In

addition, there is a single discussion area for the entire section. When a weekly discussion topic is posted, each of the teams is expected to discuss the topic amongst themselves. Each week, certain teams are required to elect a representative to actively participate in the whole-class discussion on their behalf. While only certain students are required to post in the whole-class discussions, all students are allowed to participate and many of them do participate, depending on the topic. All students are required to participate inside their team's discussion area. The student representing the teams bring forth their team's best thinking on a topic and are expected to thoughtfully respond to other postings.

Jennifer has a teaching assistant (TA) who writes and grades the midterm and final exam. While the TA has been asked to monitor the discussions, the TA is still tentative about jumping in and facilitating. Before the TA posts to a discussion, the TA always asks Jennifer to review before the TA posts it. This review takes place about once a week. Jennifer believes that the students intimidate the TA.

The size of the discussions vary quite a bit based on the topic. The whole-class discussion can vary from 30 to over 200 posts in a single week. Internal team discussions are often bigger than the whole-class discussions and average about 100 posts per week. All together, this course has about 1000 posts per week.

Jennifer will typically contribute about 10% of the posts to the whole-class discussion. While she does not typically post in the team areas, she reviews the boards and sends emails to students who are not actively or appropriately participating. These direct emails generally elicit detailed responses from the students and let the students know that she is paying attention and their contribution matters.

> …they are very appreciative of it. They'll tell me you know I've had, my father died, my brother was in a car accident, I just changed jobs, they will tell me all these things and you know they are just appreciative that somebody is out there that really does care…that is paying attention to them.

Jennifer spends about an hour a day, six days a week facilitating the discussions and reading through the team discussions. She reads through the public discussion and reviews the statistics on the team discussions. When composing messages, she chooses her words very carefully and often directs the response to a single person. However, she does this fairly quickly. While she is not particular about her students' spelling and grammar, she double checks her posts since she feels that it's important for her to maintain a higher standard to establish presence, authority, and professionalism.

Two of Jennifer's posts are reviewed in depth below.

First Post

> Yes, your score can change. The surveys give an indication of your tendency. As you gain in years and experience, intellectual maturity and cognitive appreciation the way you would answer a question can change. It is not surprising to see high scores given that you are all highly motivated individuals taking a class online in an MBA program!

Jennifer knew that this would be a common question, and chose to respond to it as the authority to keep it from coming up again and again. She understands from past experience that her students will start to make connections relative to the discussion topic – whether managerial skills are innate or learned – and start to reflect on how they have changed over the years. A student made this connection immediately after Jennifer's post.

Jennifer sees the evolution of the students throughout the semester as they become more and more involved with the content. For this topic, she knows that the students come with opinions on the innate nature of leadership and that she will need students to look at this issue from both perspectives. As they continue through the semester, Jennifer uses posts like this one to provide an opportunity to let students make their own connections.

Second Post

> Sadly, yes we must keep "beating this horse" because we have not agreed on either the definition or how to answer the questions of ethics. I'm not sure about the "Supreme Soviet", but for sure the accrediting body for Colleges of Business (AACSB) are requiring "ethics" be a part of programming, as are other academic accrediting agencies. We, the academics, have struggled endlessly about how to include ethics.....as a class, as simply a part of a class, as a module of learning, as an entire program??? And there is also the question of who and how to "teach ethics"???? Is anyone qualified to "teach" ethics, or only philosophers?

This post is in response to a student's responses to Jennifer's earlier question about "ethics and leadership and if unethical behavior occurs for a leader who has proper values and intentions" To which another student responded forcefully, demanding if the group needed to keep beating this "dead horse" and referred to the university system as being a Soviet-like empire that was not being ethical about the use of student fees.

In this post, Jennifer establishes control of the conversation and uses her authority to keep the class focused on the actual issue of ethics and leadership. She highlights this as a very important topic for the course. However, the decision to post was not obvious in this case. Jennifer had to take a little time to decide whether or not to respond to this challenge. While the student had brought up important issues and really placed a challenge to authority, the questions posed by the student was not directly aligned to the topic of conversation. Hence, her post combined an establishment of authority as well as connecting the issues raised by the student to the topic at hand.

This particular student continued the discussion (thus continuing the beating of the dead horse) by providing specific examples of where he thought the university system was not being fair, though not maliciously, with fees for parking etc. that were levied to the online students even though the student would never set foot on the actual campus. Other responses respectfully challenged Jennifer directly about student fees (as Jennifer

is part of the administration as well as the professor). Jennifer encouraged these challenges and let the students continue the discussion. Jennifer also gathered more data since she was not confident that the data she provided in earlier posts was up-to-date, and she shared the new data with the class in a later post.

CASE STUDY SIX: JULIE

Introduction

Julie is an associate professor at a large university (>20,000 students) where many on-campus students take courses online. Julie teaches both hybrid – a mix of face-to-face and online – and fully online courses related to American Studies. She has been teaching online for about 9 years. A nationwide expert for online learning referred Julie for this study.

Course Overview

For this study, Julie chose to describe her facilitation of an undergraduate course titled "Introduction to American Studies" in the American Studies department of the Arts and Humanities college. The three-credit course follows a traditional 15-week semester schedule. The course is completely online and has no synchronous class events. However, Julie uses synchronous web-chat for one-on-one conversations such as office hours. The current section of this course has 26 students in it; the students in the course are campus residents. Some students stop by for office hours in her on-campus office. The grade for the online discussions counts for 20% of the grade and the online discussions are considered to be critical to the success of the class. The remainder of the grade is dependent on short essays and a final portfolio. Online discussions take place

every week throughout the semester. Julie posts two to three discussion questions at the beginning of the week and the students can respond to the topic until the end of the week.

This was the first time that Julie had taught this course fully online and the first time she has taught the course in a few years.

Students taking the class are not necessarily experienced online students but often know each other since all are on campus.

Becoming an Expert

Julie started using online discussions in her classes through as listserves and email around 1995. When she needed to start adding more visual exhibits in a material culture class, a colleague showed her how Mosaic could help. This spark eventually included making a virtual museum where her students could display their own creations as personal exhibits. The virtual museum project involved four or five faculty working together, though only one actually taught the course where it was used. Julie started teaching fully online courses in 1997 and was one of the first professors at the university to teach via a course management system. The university's office of information technology supported her in these efforts and continues to provide support to this day. She used the listserves until the course management systems included a usable online discussion technology. Julie continues to use a blend of course management technology and other technologies such as web chats and listserves to meet her needs.

Being a pioneer at the university, she took a sabbatical from teaching and helped other faculty move online in 1998. She continues to help other faculty at the university and gives presentations at conferences to help advance the field.

Julie changes her courses every year, and maintains a record of her online discussions so she can go back and review them the next time she uses a particular topic.

Beliefs about Facilitation of Online Discussion

Julie expects her students to sustain thoughtful online discussions without her intervention as she believes that this develops critical communication skills. Much of the discussion that takes place in this subject area involve digging deeper into concepts and requiring the students to explain everything further and in more detail. She expects students to develop tough questions, and start to predict what the answers might be for those questions so that the students' thinking "becomes deeper and richer."

By the end of the semester, Julie expects to be able to simply participate in, and not lead, one of the discussions. Her students should be able to maintain the discussion and post the probing questions and thoughtful responses on their own. This responsibility is made explicit when students are assigned to facilitate their own discussions in their own "beats" – areas of interest.

Julie clearly believes that the technology being used has a major impact on the style and quality of the online discussions. She uses three main technologies, WebCT, Blackboard, and listserves for her discussions. She has noticed that the interface in one system makes it so difficult to distinguish new from old messages in a busy discussion that students either post without reading any of the discussion other than the initial topic Since she is assigned the technology based on the class she teaches, she notices these differences and has to overcome them to be effective. At times she feels that the technology is working against her.

Julie pays special attention to the posting and reading patterns of her students. She believes that this can tell her something about the context of the student's message. For example:

> And some students are really good at posting things, but you look and they've read like 10% of the total posts. Which usually you'll ask them and they will say "Well oh yeah, I only read the stuff you write."

This type of reading and posting behavior does not align with her requirements, as its much more like a traditional classroom response model and not aligned to a self-sustaining discussion.

> [It is] like it's this is the [picture] of me sitting on my little tree stump and they all sit in a little circle around me and I ask a question and they each take turns answering. And I'm really trying to get them to interact with each other.

When the technology does not support her requirements, Julie does her best to overcome the limitations by finding other technologies that do meet her needs and integrates these technologies into her classroom.

Facilitating Online Discussions

Julie posts two to three topics each week for the students to discuss. As she expects her students to migrate from a teacher-centered model to a self-sustaining discussion, Julie spends a lot of time early on modeling facilitator behavior. She models by posing questions that require the students to think about a given topic in more detail and with other perspectives.

Each of the discussions contains around 25 posts in them. Julie posts make up about 25% of the total discussion. The students are required to post in the discussion and receive two points for responding to other people's posts, one if they just post, and zero if they are absent. Discussions start on Monday and end on midnight Sunday. She encourages them to post earlier than the weekend to ensure that it's a discussion and not a last minute activity on the weekend.

Julie's first rule of facilitation is "do no harm, if it ain't broke don't fix it, and if it does get broke, fix it right away." If the students are staying on topic, posting good questions, Julie respects their contributions and sees no reason to "pop in, every time someone says something." But, when the discussion starts going off-topic, Julie jumps

right in, as many times as necessary, to get the discussion back on topic. If required, Julie can be “a little bit more harsh” and a lot more involved to keep people focused. In one example, Julie noted that she posted 23 of 68 (33%) posts in a discussion that had required a lot of steering.

Every day, Julie takes time to read through all of the new messages – which is much easier in some platforms than others – and gets an idea of the direction of the two or three discussions. She is very spontaneous in her responses and constructs them and posts immediately when the need arises. Over the course of a week, Julie spends about 6-8 hours facilitating the discussions.

A review of two of Julie’s posts is provided below.

First Post

> *The "The Blind Men and the Elephant" demonstartes [sic] this inability as the men fight over who is right, instead of realizing that together they could form a total picture.*
>
> This makes an interesting contrast to the message in the Quilt poem, I think. But are these two different views of religious diversity really "feminine" and "masculine"?

This was a post in the middle of a discussion about intersectionality that included one poem written by Alan Ginsburg. Julie had already redirected this discussion a couple of times by highlighting key misconceptions (e.g. Ginsburg was Jewish, not Catholic) by making connections to the readings.

In this thread about a set of poems *A Prayer for my Marriage, The Blindmen and the Elephant, America,* and *Crazy Quilts.* A student has just posted a statement that generalized males as unable to work together to create a common picture, but instead choose to squabble over who is right. The student also claims that men are less likely to submit to religion than women are, since males are typically dominant. The example

given is the parable of *The Blind Men and the Elephant*. Julie posts this response to get them to make the connection between this idea and a poem – a poem about women building community through sewing a quilt together - the students have previously read. The question she poses encourages them to question the Blind men poem as being a man/woman contrast or just a picture of humanity in general.

Its obvious to Julie that this student has read and understood a number of other students' posts as the statements the student makes reference to their ideas. Julie also notes that all three of the students are women, and that they are looking at these concepts through a feminine perspective and the have not taken that into account for the academic side of the discussion.

> What both of them, or all three of them, all three woman, all three females students are missing the fact that they are reading this through a gendered lens as well. That they are interpreting this like 'isn't that just like men'.

Hence, Julie indirectly points out this interpretation by asking the group to determine if the feminine and masculine views are really part of the discussion. The students respond and begin to look more at the poet and the poet's perspective on society and the subjects within the time period and societal norms instead of just interpreting the words with the students' own perspectives. This shift of perspective is directly aligned with the core learning objectives of the course.

Second Post

> Again, keep in mind that Ginsburg is viewing America through multiple lenses -- a man, A jew, a queer in the 1950s and 60s, when most gays were closeted. To focus only on his biological sex and connect with "heteronormative" (straight as the assumed and normal state) construction of masculinity is to miss the point of intersectionality!
>
> JR

Julie is trying to get her students too focus on Ginsburg's perspective. She want them to try to put themselves in his shoes and see how his poem of questions is a product of who he is and where he is when he writes it. This is the key point of intersectionality, which is the key course concept being covered in this discussion. The students sill have not been able to shift their perspective, and don't really seem to be doing more than giving their own perspectives on the poem. Julie is a little "testy" at this point, and starts off the post with "Again" to demonstrate that the students need to listen this time and that they are not going down the right path at this time.

Since the students have not come up with the perspective Julie was looking for, she provides the key perspectives from the reading that would have a major impact on Ginsburg's writing. Other students had simply assumed that since Ginsburg was white and male, he should be writing from a perspective of power and privilege, which is certainly not the case. She understands that this is one of the most difficult concepts to grasp, and wants to make sure that the students get it before the week runs out.

The students began to respond well to Julie's direction, and began to make connections to other parts of the reading and began to understand Ginsburg's perspectives better. However, the time ran out before all questions were really addressed.

Even though it is a complicated poem, she intends to use it again next year. However, next year, she'll reduce the number of poems – or even eliminate all other poems from this discussion – so the students will be able to focus more on Ginsburg. She will likely re-use a podcast interview she conducted on the topic of intersectionality and masculinity to enhance next year's discussion.

CASE STUDY SEVEN: ANNA

Introduction

Anna is an assistant professor at a small university (< 20,000 students). Anna teaches both face-to-face and online courses related to curriculum and instruction with a specialty of instructional technology. She has been teaching online for about 9 years. A nationwide expert for online learning referred Anna for this study.

Course Overview

For this study, Anna chose to describe her facilitation of a graduate course in the College of Education that focuses on curriculum theories. Student complete readings and group projects and discuss their learning online.

The three-credit course follows a traditional 15-week semester schedule. The course is completely online and does not have any synchronous class meetings.

The section that is discussed has 42 students in it, which is almost to the largest online section Anna has facilitated. Most students in the course are located across the United States and one student is from Europe. English is a second language for many of her students. The grade for the online discussions counts for roughly 30% of the grade and online discussions are considered to be critical to the success of the class. Online discussions take place just about every week throughout the semester; when whole-class discussions are not active, students in small groups work communicate with each other too keep their projects moving forward. Anna posts one topic for each discussion. Students have a set expectation for participation in the discussion, and Anna prefers students to post during the first week, but the discussion stays officially open until the end of the semester in case someone has a thought they want to add, or someone who has had other barriers to participation (e.g. sickness) can catch up.

Becoming an Expert

Anna has been developing multimedia and online information and been involved with distance education for well over 12 years. She got started as a student in an audio/video conference course that originated in the same university at which she now teaches. To learn more about the development side, Anna volunteered her development skills for a local church and began to learn how people perceive the Internet and resistance to change. After a personal injury kept her from continuing her existing career, Anna started a Ph.D. program in Instructional Technology and got a job as a Web Developer at a local organization. During this period, she worked with two faculty members, one of which was her advisor, and encouraged the two faculty to try out the medium as a professor instead of just as a researcher.

Anna assisted the two professors develop and facilitate the courses. The courses went very well, earning a national award for "Best Higher Education Distance Education Course." It was during these first courses that Anna got her first experience facilitating online discussions. She watched how the professors managed the online communications, and then began interviewing other faculty for her dissertation on their perceptions of online teaching. With this knowledge, she began to cover for one faculty member when he was out of town, modeling her online facilitation after his typical processes.

To further her knowledge in the new field of online learning, Anna took the Wisconsin distance education certification course. During this course, she collaborated with a number of other online professors and learned effective instructional design for online teaching and learning. In addition, she learned effective facilitation techniques by watching how the expert online facilitators operated as well as through the course content. Anna still communicates and shares ideas with a number of the professors. Not long after completing this course, she was offered the assistant professor position where

she is now and began building additional online courses. Through university and grant funding, she has led the development of nearly online 30 courses that are part of a number of new masters programs.

Anna tries new strategies each year based on what she learned the year before. For example, she has felt that the discussions are too large with 40 people to be able to explore new ideas that come up during the discussions. Next year, she is going to try smaller discussion groups with four or five students per group where you can "keep the ball in the air and moving easier."

Beliefs about Facilitation of Online Discussion

Anna believes that the online discussion is one tool that helps her reach the course learning objectives. She believes that the online teaching is more efficient for both the student and teacher than traditional face-to-face instruction. Most importantly, online learning gives her the opportunity to understand what the students know and remedy any issues before its too late. It gives her and her other online colleagues the opportunity to make sure the students absolutely understand the concepts and possess the skills before the students move on to the next class – even if they never get to meet their students face to face.

> .. the most successful person I know is down the hall here and he makes his students in his online course do things over and over again till they do things right. And do they thank him. At the master degree hooding ceremony here in December there were 10 people that asked him to hood them…[even though] he had never met them or seen them in his life.

Anna does not dispense knowledge in an online discussion. Instead, Anna believes a good online discussion drives student learning through student's sharing new knowledge and responding to others' posts. She intervenes only when necessary, as she believes that the learning takes place when students interact and aren't being told what to think.

> …I would say I do not want people to sit around like baby birds and wait to be fed or wait for me to respond to them. I think it works better when the other students are responding, they respond first and then I come in.

The experience and ideas from her students are a big part of Anna's discussions. She requires her students to post descriptions of relevant, real-life examples of course concepts. This requirement stems from a deep respect for her students and what they bring to the table. While she does not expect them to be geniuses at every turn, she sets high expectations for what the students add to the discussion. This is what she calls being a "Good enough mother."

> For me I think it's very important to respect students and to help them express their ideas coherently and persuasively and maybe I don't push persuasively enough but certainly coherently.

She also understands that many of her students are active teachers, and have the opportunity to apply – or are already applying - course concepts of curriculum theory. Anna makes an effort to point this out for her students.

> Well because many of [my students] have classrooms and I want them to be able to relate curriculum theories to what happens in the classroom. It is not something in a book that you look at and take an exam - we actually do a lot of things in our classrooms that are related to curriculum, whether we know it or not and I say it's time that you know it.

Anna sets clear expectations for student participation by using rubrics and by making the discussion participation a significant component of the overall course grade. While many of her students are second language learners, she maintains high expectations for proper writing. Anna keeps these writing standards high because graduates of her programs will be expected to write clear communications aimed at school leaders and parents. The online discussion provides an avenue to practice clear and proper communication. Of course, the rubric does not only measure punctuation and grammar; the rubric measures the clarity and relevance of the posts to the overall discussion.

Like many of the other participants in this study, Anna encourages students to make connections between their postings and the course material. She also finds it easy to get her students actively involved with the content and is always surprised by how much the students are willing to write and share. When the course is over, she believes that she gets to know her students better online than she does face-to-face.

> Well for one thing people will say more than you think they're going to say and they may not stick to the subject, by more than you think they are going to say isn't just that they are worried, they will reveal more. You often find you get to know your students so much better on line course than you do face to face.

Carolyn attributes knowing her students better to the fact that she is able to interct with each student directly instead of having a usual group of 8-10 dominate the discussion in a traditional face course. Her students post a bio and a picture of something that is important to them, but do not necessarily post a picture of themselves.

Facilitating Online Discussions

Anna's discussions typically contain around 100 posts per week. Of the 100, Anna posts approximately 1/3 (or about 33 posts) of the messages. She spends approximately 6 hours per week on the discussion threads and other course activities. When Anna is traveling a lot, her graduate assistant will feed her suggested responses; Anna will modify these responses and post them to the discussion under her name.

In the past, Anna tried responding just to the first posts made by the student; next she tried waiting until most of the students had posted before jumping in. The latter method is less time consuming and seems to be just as effective. Since the issues students have from year to year are similar for the same courses, Anna maintains a file of prior responses. She takes those responses and inserts them into the discussions with slight modifications each year. This has the effects of a) taking less time, b) ensures consistency, and c) maintains the high writing standards that she places on her students.

As a general rule, Anna responds to every student at least once for every discussion. These individual responses typically contain direct feedback to the student but are posted publicly. Both positive and negative feedback are used to shape student participation. The feedback is often very short but to the point. Anna realizes that her students are looking for this feedback so the students can adjust their discussion participation to meet her expectations. To help students distinguish her posts from others, Anna always finishes each message with her first initial on a line by itself - a clear and easily recognizable marker.

The remainder of the case study looks at a set of posts that Anna chose to review as part of the study. For each post, the actual text of the post – as seen by the students in the blog – is followed by a brief deconstruction of the post.

First Post

> P,
>
> You really explained your point of view well. I especially liked two sentences:
>
> 1. "Learning is more a journey than either a destination or an individual perspective." That captured all three well.
>
> 2. "Thinking you know the answer is one thing. Knowing the answer is another. But understanding what you know and thinking through it and perhaps even changing your opinion about what you 'know', that is where learning takes place."
>
> It reminds me of one of my colleagues, who teaches statistics online. He is interested in more than the right answer: he is interested in you explaining the process and the reasons for it. You can bet his students know their statistics when they finish his course.
>
> A

In this post, Anna was providing specific feedback to the student about certain elements of his post. Clearly, the student had articulated his points well and made some

important points. By breaking these points out into her public post which she knows that everyone will read, Anna highlights these important points for the rest of the class. This has two effects on the class: a) it shows other students what Anna is looking for in terms of effective participation, and b) it highlights two key course concepts.

Second Post

> Margaret,
>
> Your outlined your opinion well. You see "factors" as a key element in the learning environment.
>
> Your examples were well chosen.
>
> A

In this post, Anna was providing general feedback to the student about the quality of her post, but also highlights a component of her post that is critical to the course learning objectives. The student had shared personal knowledge about a nature vs. nurture debate

Third Post

> Naomi, you really made a good point. It is a matter of custom whether we eat casseroles or not
>
> We do have to draw the line somewhere on what is basic literacy. We need to share a certain amount of "culture" don't you think?
>
> A

In this post, Anna provides general feedback to the student about the saliency of the student's point about casseroles and then directs the group with a much deeper question about sharing culture. Prior to the student's post, a student who was teaching a food science class had shared personal examples of cultural influences on education. The first example was the student's suggestion to a food science class that they make a

casserole for a project. It turns out that most, if not all, students had never heard of such a thing and certainly had never made one. In the dominant, non-Anglo culture of the school, casseroles were not part of the local diet or vernacular. Hence, her teaching was not culturally appropriate and she had to change her directions. The second example related to a child who asked the question "Do I have an accent?" As the student who relayed the story explained it, everyone has an accent; there is no one way for speaking a language.

Anna finishes the post by challenging the students to think about what we all have to share in terms of literacy in order to effectively communicate with each other using the same language. The participants responded to this challenge with thoughtful responses.

Fourth Post

> Abby,
>
> This is one of the nicest essays you have sent me.
>
> I especially liked the references to interaction and motivation.
>
> Please revise this essay, paying attention to grammar, especially the agreement of subjects and verbs. I look forward to seeing the revised assignment.
>
> A

This particular student was from a foreign country orginally and had been having difficulty composing messages that met Anna's standards for proper writing. The student had worked hard to improve and Anna responded by giving clear and public encouragement regarding the actual composition of the post. Even though it was a clear improvement, Anna noted that Abby had more work to do; the standards have to be the same for all students. While Abby's posts didn't always meet the rigorous writing

standards, Anna and other students valued Abby's contribution to the overall They really enjoyed Abby's varied perspectives and examples from a vastly different culture.

SUMMARY OF CASES

To be included in this study, the participants were required to have more than five years experience teaching online, be part of an established online program, and utilize online, asynchronous discussions as a major component of their online courses.

Within these restrictions, the set of participants were purposefully selected to be diverse in terms of subject areas, class size, and size of overall school/university. The subjects included Operations Management, Special Education, Educational Research, Judicial System, Leadership, American Studies and Instructional Technology. Classes ranged from eight students to 67 students. The schools ranged from 2,000 students to over 40,000 students. This provided as broad of a range of experiences and cases as could be expected for seven participants in this field.

There were a number of similarities and differences in this set of participants. All were extremely involved and enthusiastic about utilizing online technologies in their teaching, but their experiences and current situations varied considerably.

All participants except Louise were pioneers in their universities for the creation and delivery of online courses. While Louise was hired to join an existing online program, the others had to start from complete scratch. While all are considered pioneers, they became pioneers for unique reasons. For example, Maya had three months to work with her fellow faculty to develop and begin teaching a set of grant funded courses; Julie and Rick eased into online courses integrating technology into their existing classes before going totally online; and Casey jumped into online courses when some of her prior students asked her to assist in scheduling conflicts. Jennifer responded

to a system-wide challenge to move courses online while Anna started developing and facilitating some of the first online courses at her university as a graduate student because it was the next logical step after the audio/video distance courses she had taken.

The progression from their first online class to where they are now varied considerably. Louise had a very difficult time getting started with to the online model, and it wasn't until she had a revelation that the process was entirely different and had its own advantages over traditional teaching. While many of the others struggled at the beginning because they were doing something that nobody else had done, they were able to experiment at their own pace. This contrast between Louise and the others is likely caused by the expectations placed on the participants as they got started. Rick and Jennifer experimented with adding technology to existing classes, so the execution wasn't mission critical. The others were experimental, and had placed expectations on themselves and to their students that the first classes were just that – a first attempt at online learning. In contrast, Louise was placed in a situation where the program had an established reputation for online education and the expectations were likely higher for her performance. Since she had been an assistant in an online course, it was assumed that she could make the transition to instructor easily. While there were many other experienced faculty available to Louise and she had a mentor, there was no formal introduction to or expectations for online instruction.

The participants chose a number of different ways to learn about online facilitation. While most experimented on their own at first, others had the opportunity to work closely with other pioneers in the field as they got started. The participants utilized local and remote peers, emerging literature, conferences, formal measures such as "Quality Matters", as well as taking early online teaching courses.

Most of the participants, with the clear exception of Rick, believed that online interactions were richer than face-to-face interactions and that they got to know their students better online than they did face to face. There may be a few reasons for this difference; Rick teaches at a very small school relative to the others and may have been used to more intimate interactions than were afforded by larger class sizes at other participants' schools. Rick also focused primarily on the instructional components of the course in his discussions and less on the interpersonal relationships between him and the students and among the students. The rest of the participants felt that online students opened up more and shared more about their relevant – and sometimes very private - personal experiences with the group than they ever experienced in face-to-face classrooms.

All of the participants have experimented with numerous technologies and intend to try new technologies as they become available. The reasons for switching between technologies relate to alignment with their needs, convenience for their students, requirements of their school, and just to try something new. They find things they like, and things they don't like about each of the technologies. For example, Casey likes the blogs since the students can access them very quickly without lots of navigation, but realizes that the blogs are not as secure as the threaded discussion technology she could be using.

The amount of time that the participants spend facilitating their online discussions does not necessarily correlate to the number of students in their classes. Jennifer, for example, had by far the most number of students with 67, but spent about the same amount of time as all the other facilitators on the facilitation. On average, the participants spent about six hours a week facilitating their discussions. In terms of minutes per week per participant, the range went from about five minutes to almost 40 minutes. To reach

this minimal amount of time per student, Julie utilizes groups and group representatives to control the size of the discussions. On the other extreme, Louise spends a lot of time carefully constructing her posts to have the maximum impact on her students. Because there are no true quality measures, its impossible to say if one is any way better than the other.

The amount of information created in the online discussions varied widely. Each student composed between two and 14 posts per week. When compared to the amount of time each professor spent facilitating relative to the number of posts, the participants spent an anywhere from 20 seconds per post to almost five minutes each post. Of course, this is not to say that they actually spent five minutes reading each post, it's just an indicator of how much time is spent reading and responding based on the number of messages.

Virtually all participants had weekly discussions that had a clear beginning and end date and time to not only control the amount of information but also to measure and require student participation. As required by the study, the discussions were worth a significant portion of the overall grade; the minimum value was 10% for Rick and the maximum was nearly 50% for Casey.

The following table provides a summary of key demographics and interesting statistics from the case studies.

	Louise	Maya	Rick	Casey	Jennifer	Julie	Anna
Subject Area	Operations Mgmt.	Special Education	Education Research	Judicial System	Leadership (MBA)	American Studies	Instructional Technology
Type of Course	Online	Online	Online	Online	Online	Online	Online
# of students in section	14	20	8	27	67	26	42
Cohort Model	No	Yes	Yes	No	No	No	No
Location of students	Across USA, some International	Across USA	Across state	Across USA	Across State	On Campus	International
Asynchronous Technology	CMS – Discussion Board	CMS – Discussion Board	Listserve	Blog Discussion / Email	CMS – Discussion Board	CMS – Discussion Board, listserve	CMS – Discussion Board,
Synchronous Technology	None	None	Chat (Q&A)	None	None	Chat (office hours)	None
Frequency / Duration	Weekly / 1 Week	Weekly / 1 Week	Ongoing, 3 major topics	Weekly / 1 Week	Weekly / 1 Week	Weekly / 2-3 per week	Every week
% of grade	40%	30%	10%	48%	20%	20%	33%
# of posts/week	90-100	200	50	140 posts / 70 emails	800-1000 (30-200 in main discussion)	50-75	100
% posts by facilitator	20-30% (17-30)	30-35% (60-70)	50% (25)	5% (7) / 70 email responses	10% (3-20) in main discussion	15-20% (7-15)	30-50%
Hrs/week facilitating	7-8	3-5	5	7-8	6	6-8	6

Table 4.1: Participant Overview

Chapter Five: Discussion

INTRODUCTION

The purpose of this study is to discover common strategies of expert online facilitators and then, instead of developing a new theory to describe the data, to determine if general frameworks of expertise derived from other domains can be utilized to describe and explain the common strategies and other expert facilitator characteristics. This chapter is broken into two main sections: (a) common strategies and characteristics, and (b) application of expertise frameworks. This chapter then concludes with implications for future research, online facilitator tool development, online facilitator training, and a caution on the limitations of this study.

By nature of their definition, strategies are a means to an end. Hence, its prudent to look at the end results that these facilitators had in mind when they were facilitating their online discussions. The fundamental question is "What are you trying to accomplish with your online discussion?" Each participant was asked a similar question both once during the initial part of the interview, then again if they brought up strategies that aligned to something they believed.

The following items were found to be common goals across most participants:

- Higher-level understanding
- Active student participation
- Self-sustaining discussions
- Alignment to course objectives

Each of these goals is described below.

Higher-Level Understanding

The participating facilitators required students to communicate at a higher level than would be expected in a face-to-face discussion. The students were expected to demonstrate their understanding of the content by (a) connecting the discussion to course material, (b) reacting appropriately to other students' posts, (c) synthesizing multiple postings and (d) adding a new insight or question for the benefit of the group.

This expectation was either implicit or explicit. Facilitators who made it explicit did so by having higher point values in their grading rubrics that aligned to higher level posts; they provided the most points to students who were able to synthesize multiple inputs – students' posts, personal experiences, and course materials – into one cohesive statement. Implicit expectations were supported by the instructor modeling this type of synthesis and through public compliments directed to students who made these connections.

Requiring higher level thinking in the posts had a two-fold benefit for the facilitators. As well as encouraging their students to perform at a high level, it also kept students from overloading the discussions with lots of simple agreement statements like "Great Idea" or "Nice."

Active Student Participation

A major difference between expert online facilitation and face-to-face facilitation of discussions is that online facilitators expect everyone in the class, not just a select few, to participate in the discussion. In face-to-face classes, smaller groups of students often make up the majority of the discussion. In the online environment, every student has the same participation expectations.

Most of the participating facilitators encouraged or required students to share relevant personal experiences – typically experiences that showed application of a course

concept in an authentic situation – with the entire class. Many online students are non-traditional students and have at least some workplace experience in related fields.

The facilitators agree that the online discussions afford students who would normally not feel comfortable discussing sensitive subjects face-to-face an opportunity to compose and share their personal experiences in an organized and safe manner.

This goal is not without problems, however. An increase in student participation also leads to an increase in facilitator workload if not managed properly. Too much participation by the students could drive the students and the facilitator to a state of information overload.

Self-Sustaining Discussion

Many, but not all, of the facilitators desired the discussion to be self-sustained by the students with little or no intervention from the facilitator. A self-sustaining discussion has two distinct advantages over one that is closely controlled by the facilitator. First, a self-sustaining discussion requires much less work on the facilitator's part. Second, students who participate in self-sustaining discussions are operating at a higher level than simply responding to instructor responses. In other words, it's a complete shift away from the traditional initiate-respond-evaluate sequence of traditional classrooms.

However, none of the facilitators actually reported having a self-sustaining discussion. All of them still posted to their discussions, if only to have a presence. This posting to have a presence, of course, is in direct conflict with the goal of having a self-sustaining discussion. Inside of the small groups that Jennifer had, she rarely posted, but certainly let students who were not contributing know that she was watching them. Anna used techniques to make sure that the students all knew which posts were hers in order to make them stand out. In some respects, the argument could be made that a self-sustaining

discussion for an online course where the discussions are being evaluated is simply not possible.

The goal of self-sustaining discussions is then more like a discussion with a minimal amount of interaction from the facilitator to achieve the same goals, using the knowledge and the presence of the instructor to enforce rules and guidelines without actually intervening. A good metaphor is the presence of police in our society. They aren't watching all of the time, but we all behave knowing that they are watching and will interact some of the time.

Alignment to Course Objectives

It is quite possible to have active self-sustaining discussions at a very high level of thinking and sharing, ripe with personal experience, that have nothing to do with the course objectives. For example, a discussion regarding the legality of lethal injection to carry out a death sentence can quickly become a personal debate on the whether or not we should have a death penalty unless the facilitator keeps them focused on the legal component of the question. All participating facilitators made sure that their discussions continued to focus on the key concepts of the course at hand.

Online facilitation can be seen as a delicate balance of a number of different parameters, some of which are conflicting. Facilitators need to balance their presence in the online to achieve their goals. They can manipulate the organization, the requirements, and the behavior of their students to reach these goals. Striking a balance between being the traditional sage on the stage instructor – the source of knowledge and rules – and the guide on the side is very difficult. On the one hand, facilitators desire their students to drive their own discussions, and the facilitator becomes just one member of the discussion. On the other hand, as instructors, the facilitators must intervene in order to keep discussions on track and discussing on-topic concepts.

If we look at the two extremes, this balance becomes a little more obvious. One extreme is that the online instructor acts as the center of the discussion, the owner of the content, and the sole evaluator of the performance. On the other extreme, the instructor simply sets the topic of the discussion and lets the students co-construct meaning amongst themselves. In theory, a well-organized set of students could construct an accurate representation of the course concepts – both as a group and individually- given enough time to do so.

Take the analogy of having the responsibility of getting a group of people from point A to point B. Given this responsibility, there are a number of ways to achieve the goal. The simplest and most direct way may be to put the group in a bus, and drive them there. However, this does not teach the group anything about the land they navigated nor does it teach them how to navigate. You could tell them how to get there, and hope that they make it on their own. Or, you can balance the two and walk alongside the group throughout the journey and keep the group pointed in the general direction, but allowing them time an opportunity to explore as a group and as individuals. You can also require them to contribute to the navigation by incorporating clues and directions and personal knowledge to help the overall group get to the objective.

The realities of college courses require that a calendar drives the amount of time that the students have to construct their meaning as a group – adding the element of time and efficiency to the navigation from point A to point B. Hence, the instructor needs to guide the group to a common goal through the process of facilitation and utilize tools and strategies that balance the need for efficiency and exploration.

If the instructor adds too much to the conversation and tries to tell the students everything and do everything for them (i.e. drive the bus), the instructor will become the bottleneck, and will end up being expected to respond to and evaluate all student posts

and will largely be held responsible for each student's learning. This is beneficial to neither the student nor the instructor. In a situation like that, the instructor would be teaching 30 sections with one student each instead of one section of 30 student each. The benefit of the group's input is lost and the instructor's efficiency is destroyed. On the other hand, too little guidance will lead to confusion and failure to reach the overall objective.

The guidance provided by the facilitator is critical. Some facilitators, like Rick, prefer to be very direct with the guidance, and keep it focused on feedback on individual progress and instructional topics. His posts were very direct and told the students what to do next on their intellectual journey. However, he also was the one facilitator who did not talk about having self-sustaining discussions; he preferred to have the direct interaction with the students at this level. This level of direct interaction was feasible with the small section of eight students.

The other facilitators always intervened in discussions that were off-topic or heading down a dead end but evaluated their options for intervention for all other situations. They balanced the needs of the student, their own available time, and their knowledge of the situation to determine how and when to intervene. This was done to make sure that the students were able to effectively use the time allotted to reach a common goal.

Interestingly enough, only one facilitator in the study explicitly stated a goal of using the discussions to evaluate the level of understanding of each student based on the contributions to the discussion. This goal for online discussions is somewhat implicit in the other facilitator's operational and instructional strategies, but only Anna claimed to not only use the online discussions as an indicator of an individual student's competency

but also act upon these indicators to address individual student needs. In other words, the discussion was acting as practice as well as a progress monitor of sorts.

Despite the contradictions inherent in these goals, the facilitators in this study have each found a balance of instructor presence and student involvement that works for them. The strategies used to strike this balance are described below.

Common Strategies

A number of common online facilitation strategies emerged from the data. These strategies are grouped into two major categories: instructional/interpersonal and operational. Instructional/Interpersonal strategies maintain social order and motivate students to participate and ensure that the learning is accurate and aligned with course objectives. Operational strategies improve discussion efficiency and participation through procedures and processes. Many strategies are intertwined and should not be considered independent of each other.

Instructional / Interpersonal

Instructional and interpersonal strategies directed how the facilitators composed their messages to the group and to individuals.

Interpersonal

Most of the expert facilitators were very aware of the social nature of the online discussion. In face-to-face classes, professors and students can rely on facial expressions, and intonation to confer approval, engagement, encouragement, disgust and many other emotions and feelings. Online, the communication is largely defined by the text of the discussion. Facilitators chose their words and timed their interjections carefully to ensure that their communications would be interpreted as intended. They included positive feedback when appropriate and negative feedback when necessary.

For example, Louise details her process for composing messages to ensure that her message is not misinterpreted:

> I don't just shoot something off and send it. I always think about it first, especially if it could be touchy. I am very, very careful to make sure that nobody feels slighted, or no one feels like I am saying, "that was a very stupid thing to say."

Likewise, Maya is quite careful when correcting an individual in the public discussion forum. While the correction is valuable to the group, Maya does not want the participant to feel slighted or singled out. She describes her response to a student that is having trouble understanding a certain perspective:

> [Maya posts] "I'm not dismissing your concerns, because they are real, but we have to give credit to Bob for figuring it out on his own." So [I'm] trying to help her see it without saying, "You are off base."

At the same time that the facilitators were providing feedback on students' posts, they were also careful not to become central authority figures in the online courses. Being a central figure makes a facilitator a bottleneck in the discussion and directly opposes the objective of creating a self-sustaining discussion. On the other hand, all of the facilitators realized that they have an authoritative role in both the learning and evaluation of the students. To balance these conflicting requirements, the facilitators regulated their presence in the discussions carefully.

Jennifer tried to act as an equal in her discussion, but, knowing that she still was the authority figure, was vigilant about keeping a higher professional standard for her own posts than she did for her students.

> And also I have a rule that says in the global discussion board, I don't pay any attention to grammar or spelling because I want them to be able to say what they're thinking and if that means typing real fast and making errors, fine. I don't do that. I make sure that what I'm saying is correct and I check my spelling…because I feel like it's important for me to maintain that…professionalism.

Anna does not want to be treated as the authority figure who dispenses information.

> …I would say I do not want people to sit around like baby birds and wait to be fed or wait for me to respond to them. I think it works better when the other students are responding, they respond first and then I come in.

However, Anna realizes that students put more weight on her responses and even uses techniques to let her messages stand out from the others in the discussion by signing her messages in a similar manner.

> You can bet his students know their statistics when they finish his course and then I put "A" at the bottom and that's my initial and that's the way I answer.

In order to achieve the goals of a self-sustaining conversation and higher-level thinking, facilitators motivated students to continue participating in the discussion in an effective manner. A self-sustaining conversation requires some level of participation from all of the students. Motivation that drove participation was both public and private. Public encouragement – provided both for the benefit of the individual that is addressed as well as for the entire group – consisted of statements like "Good point, Melinda", "You guys are really getting it." Private intervention and encouragement included private emails sent to individual students to question a lack of participation or correct a complete lack of understanding. These communications included inquiries about sudden drops in participation as well as quantitative summaries (i.e. grades) of student participation. In both of these examples, the purpose was to let the student know that the facilitator values their participation. In almost all quoted cases, this strategy was very effective in increasing individual student participation.

The implementation varied widely based on the perceived need. Louise started off one of her responses to a particularly difficult discussion with some empathy to let participants know that it was ok to be struggling and that they were making progress:

"Definitely Tough: Everyone's done a great job attempting to answer this not-so-easy question." Rick was very direct with how he started off corrections and guidance for a project proposal "Your IV needs to be more complete. What it is depends on what you want to know." Anna started all of her posts with direct feedback to the participant. For example, Anna posted: "You really explained your point of view well. I especially liked…"

Presence

Self-sustaining, high-level conversations are achieved through a careful balance of facilitator presence. Too much authoritative presence, and the discussions all point back to the facilitator, requiring an enormous amount of effort for the facilitator. Too little presence and anarchy could arise. Hence, the facilitators employ a number of strategies to establish a certain level of presence in their online discussions.

This group of facilitators described their presence as a combination of knowing that "someone is watching, and they care" with an authoritative figure setting the direction of the group and enforcing rules as necessary. At the same time, they also phrased many of their communications to encourage the students to take ownership of the conversations and to drive the conversation on their own.

Presence is established by both what the facilitator says as well as when it is said. Some facilitators established a communication style in which they felt they were just part of the conversation, but then established themselves as the authority figure when necessary.

For example, Casey interjects only occasionally and "in terms of the whole class, I'm sort of the lurking presence." On the other hand, Casey maintains her authority when necessary: "a comment from me 'we're not discussing this anymore,' shuts it off immediately."

Sometimes, a facilitator will post just to let the group know that they are still there and watching all of the time. Louise, did just that with one of her posts for this study.

> I like to have a presence and sometimes I have to try to work hard at finding something to post, because…especially if they seem to be going pretty well on their own. But I think that it is really important that I am in there and they know that I am in there.

As these discussions take place within an undergraduate or graduate context, the academic nature of the discussions is paramount. As described previously, the facilitators all require their students to participate at a high level. They expect their students to make connections between the conversations and the content, understand and provide feedback to other students' posts, synthesize multiple postings with the content, and add their own insights and experiences. The facilitators also need the discussions to align with the course content; this requires the facilitator to be vigilant about the accuracy and direction of the conversation.

The facilitators had a common set of instructional strategies: Correction/Redirection, Enlightenment, Connection, and Focus. Each of these strategies is described below.

Correction / Redirection

As evidenced in the case studies, students have misconceptions and can go off-topic in an online discussion. Facilitators either corrected misconceptions or redirected discussions that had gone off-topic. As resident experts in their respective content area, the facilitators quickly spotted misconceptions and addressed them for the entire group. When a discussion went off-topic, the facilitators accepted the responsibility to bring the discussion back to the topic that aligned to the course objectives.

Since some facilitators use similar questions from semester to semester, they were prepared to jump in at points where they knew that many students had misconceptions.

Because of the public medium, they were able to correct the misconception for the whole group at one time.

In her Judicial Systems class, Casey has had to redirect conversations that drift off-topic. For example, she provided a lengthy post to redirect a sensitive death penalty conversation to three topics that were more aligned with the course objective:

> Let's stop the debate over how painful this is or is not. None of us are trained in this area and pain is a relative thing. Some people are more pain sensitive than others. I think we need a change of direction….[list of three questions]… You may address any or all of these three questions but subject of doctor's presence is now off limits and so is whether process is ultra painful.

In Julie's case, she had to correct the assumptions that students had made about the majority privilege of a poem's author because he was a white male, while in fact he was from a few minority groups.

> Again, keep in mind that Ginsburg is viewing America through multiple lenses -- a man, A Jew, a queer in the 1950s and 60s, when most gays were closeted.

Enlightenment

To reach higher levels of thinking and communication, the facilitators either contributed or elicited additional information to improve the learning experience. Facilitators shared personal experiences related to the topic, or encouraged students to share their experiences with the class. As many of the students had relevant work experience and were happy to share their vignettes, this strategy helped the facilitators maintain the high level of discussion as well as moving towards a self-sustaining discussion.

Like most of the facilitators, Jennifer shared knowledge gained from teaching the course a number of times before. In this case, she lets students know that their scores on a managerial aptitude tests can change over time.

> Yes, your score can change. The surveys give an indication of your tendency. As you gain in years and experience, intellectual maturity and cognitive appreciation the way you would answer a question can change.

Likewise, Casey shared a number of examples where she brought new knowledge – not available in the course materials – to the students when it became relevant in the discussion.

> It is THE LAW IN [THIS STATE] that both child and elder abuse MUST BE REPORTED. You can be prosecuted for endangering the life of a child or an elder in [this state].

The use of enlightenment can contradict the goal of self-sustaining discussion and even discourage active participation. Too much enlightenment puts the instructor at the center of the stage, and the students will look to the instructor to add more and more new knowledge as a course of action.

Casey and Rick made the most use of the enlightenment strategy; they both were very focused on keeping the students on-topic. Casey often followed new knowledge statements with additional questions that forced the students to think more in-depth about what she had just added, and then directed the students to discuss the new topics.

Connection

One of the main indicators of higher-level thinking is the synthesis of multiple inputs into a single post. To model this behavior and to continuously demonstrate the relevance of the online discussion and the course objectives, facilitators constantly make, and encourage students to make, connections between discussion posts and course materials. In Louise's words:

> I try to post further questions to try to connect the things that they have learned already, or try to get them to bring in things from their experience. To me that's what would make it high quality

Maya gives an example where she ties ancillary course materials to the discussion to make sure the students have all of the information before making judgments.

> I don't know if you've had the chance to view the videotape of Bart... oh no, of course not, your packet didn't come!! You'd understand the severity of Bart's physical disability and how this level of support is critical to his daily life.

One of the limitations of this study was the number of posts that were able to be analyzed in a reasonable amount of time. This is certainly one area where a much larger sample size could determine just how much this strategy is used – and to discover the usefulness of the strategy to reach course goals. Of all of the strategies, this one requires the most knowledge of the content and in-depth comprehension of the entire discussion.

Focus

Because of the nature of the asynchronous discussion technology, there are unlimited possibilities for what can happen in the discussions.

As their students began to communicate at a higher level of thinking, the facilitators kept a watchful eye for posts that highlighted key ideas aligned to the course objectives. When a student hit upon key ideas, the facilitator would highlight the student's key idea and make it clear to the class that this statement was critical to the understanding of the course material.

Out of a long post, Anna extracts key points and brings them to the attention of all of the students: "You really explained your point of view well. I especially liked two sentences." The two sentences that Anna highlights key course concepts.

Julie follows up a correction statement with a second statement that helps focus the students on the key point of the entire topic:

> To focus only on his biological sex and connect with "heteronormative" (straight as the assumed and normal state) construction of masculinity is to miss the point of intersectionality!

Every participating facilitator used focus strategies to highlight key points of student posts and to indicate the highest importance concepts. The focus could be found in two different incarnations, reiteration of key concepts and extension questions. When the facilitator reiterated a statement made by a student, the facilitator was in fact saying the group "What this student said here is most important." When the facilitator added a question on the end of a post, it was also saying: "Of all of the things we covered so far, here is one that is most important and worthy of your attention."

Operational

Operational strategies are procedures and processes that the facilitators implement to help them achieve their goals. These routines help the facilitators manage the flow of information, ensure the quality of their own posts, and reduce confusion and conflict over grades and other forms of evaluation.

Efficiency

Information overload is a common problem for facilitators and students alike in online courses. There are no practical limits on how much can be posted to a single discussion topic and a hot topic can quickly overload the reader. Once overload has happened, the reader may not participate properly. Hence, facilitators use a number of efficiency strategies to maintain the sheer amount of information that any one person is expected to read and understand.

Reduce information overload through quoted text.

Some of facilitators recognize that their students tend to skim other students' posts and read the facilitator's posts carefully. Hence, they take some time to quote other students' posts and summarize the discussion so that all students can keep up to date and

participate effectively with minimal effort. Louise explains why she does this by saying "I am assuming that if they are going to read anything, they are going to read my posts." Julie has found the same type of behavior in her students.

> And some students are really good at posting things, but you look and they've read like 10% of the total posts. Which usually you'll ask them and they will say "Well oh yeah, I only read the stuff you write."

Hence, Julie uses quoted text to show the reader what others have said before she begins to compose her response.

Place time limits on discussions.

All but one of the facilitators put time limits on the discussions. Most of the discussions mentioned by the participating facilitators were exactly one week long. This restriction has two purposes. First, it requires the students to stay active all of the time and not procrastinate for long periods. Second, it keeps the total number of posts to any one discussion to a manageable size.

The one facilitator – Anna – who did not place time limits on the discussions preferred to have students post during the scheduled time, but accommodated those with emergencies.

> I'm kind of loose on that I prefer that people post everything on time but occasionally you will have someone that has some kind of family crisis or something like that and I just would rather have them contribute to the discussion even if they come in late.

Break up class into smaller groups.

By breaking up a larger group into two smaller groups, the facilitator effectively cuts amount of reading for any one student in half. One facilitator broke her very large (67 students) class into smaller groups of five to seven students. These steps allowed these facilitators to have the least amount of time spent on the online course relative to the number of students in their classes.

Jane describes her task of facilitating a course with almost 70 students in it and why she broke it up into smaller groups.

> It's like having 70 different classes with one student in it. And so that's how I learned how to better use teams rather than just groups. This has been as much of a learning experience for me as it has been for the students. The students, those who take online classes, most of them for the most part have been doing everything online anyway for years. They're not the newbies to the technology as much as we the instructors are. And so the learning experience, the learning curve has just been exponential. So I put them in teams and created team discussion board and the teams talk about the topics.

Reading/Composing

Each of the facilitators used their own combination of strategies for reading and responding to posts in the online discussions. The strategies aligned to their personal working habits and existing schedules. However, some common strategies emerged for reading and composing.

When reading discussion threads, most of the facilitators had time set aside each day to read through the entire discussion before choosing to respond to any of the posts. They did this to make sure that they understood the nature and tone of the conversation as well to make sure that they were not going repeat a post that another student has already made. They then chose where to intervene and began to compose their message(s). Almost all of the participants took a minute to review each word of their posts for grammatical and spelling errors as well as any possible points of confusion or misinterpretation. Some of the facilitators composed messages over a longer period of time, electing to compose the message, hold it, then re-read and post later.

Louise is very purposeful and takes a long time to compose her messages, even developing drafts and letting them sit for a day or two before posting. It's a personal choice for her that aligns to her reflective nature.

> I like to reflect before I send anything. That is really…valuable in online learning, too. People [who like to reflect] tend to do better online because,…[reflecting] doesn't work very well in a face to face environment.

Rick uses a different strategy; he reads through all of his messages at once in the morning, then tackles the immediate technical and operational questions before digging in to the more academic questions. He, like most of the facilitators, performs a grammar and spelling check before posting.

Expectations

While none of the participants mentioned an ideal number of posts for any given discussion, most of the participating facilitators described quantitative posting requirements for student participation. In all of these cases, the facilitators only counted posts that were of a certain quality or higher. The measure of quality was generally described by a detailed rubric. Because it was a requirement for participating in the study, all of the participating facilitators assigned a significant portion of the overall course grade to the online discussions.

Many of the participants used rubrics to quantify their expectations for student participation. For example, Maya's rubric is as follows:

Name: _____ **Date:** _____

Discussion Topic: _____

Category	Excellent 5 pts	Good 4 pts	Satisfactory 3 pts	Needs Improvement 2 pts
Quantity of Responding **5 Pts. total** **Points:**	You posted above the minimum number of responses. You replied to others. Your postings elicited responses from classmates	You posted responses above the minimum number. You replied to your classmates posts.	You posted the minimum number of responses.	You did not post a sufficient number of responses (2 comments minimum)
	Excellent **5 pts**	**Good** **4 pts**	**Satisfactory** **3 pts**	**Needs Improvement** **2 pts**
Quality of Responding **5 pts. total** **Points:**	All of your comments/opinions were grounded in course materials and readings and personal experiences. You always presented reasoned and balanced arguments and comments	The majority of your comments/opinions were reasoned and well-balanced and were supported from readings as well as your personal experiences	You shared comments/opinions based on your experiences but without a clear and direct link to readings.	You shared opinions and comments that did not pertain to the discussion group topic and/or were without support from the readings or your personal and professional experiences.

Total Points: _____

Anna's rubric is very similar, and is included here:

Quality of Posting	6 Points	4	2	0
Response to assignment questions	Responds completely to all questions.	Responds to most questions.	Responds to a few of the questions.	Responds to one question or less.
Focus on Topic	There is one clear, well-focused topic. Main idea stands out and is supported by detailed information.	Main idea is clear but the supporting information is general.	Main idea is somewhat clear but there is a need for more supporting information.	The main idea is not clear. There is a seemingly random collection of information.
Relates text and articles to the assignment	Cites the text and all articles in relation to the assignment	Cites the text and almost all articles in relation to the assignment	Makes few citations from text and articles in relation to the assignment	Makes very few or no citations from text and articles in relation to the assignment
Accuracy of Facts	All supportive facts are reported accurately.	Almost all supportive facts are reported accurately	Most supportive facts are reported accurately.	NO facts are reported OR most are inaccurately reported.
Sources	All sources used for quotes and facts are credible.	Most sources used for quotes and facts are credible.	Few sources used for quotes and facts are credible.	Sources used for quotes and facts are less than credible (suspect).
Structure	4 Points	3	2	0
Grammar and Spelling	Writer makes no errors in grammar or spelling that distract the reader from the content.	Writer makes 1-2 errors in grammar or spelling that distract the reader from the content.	Writer makes 3-4 errors in grammar or spelling that distract the reader from the content.	Writer makes more than 4 errors in grammar or spelling that distract the reader from the content.
Capitalization and Punctuation	Writer makes no errors in capitalization or punctuation, so the paper is exceptionally easy to read.	Writer makes 1 or 2 errors in capitalization or punctuation, but the paper is still easy to read.	Writer makes a few errors in capitalization and/or punctuation that catch the reader's attention and interrupt the flow.	Writer makes several errors in capitalization and/or punctuation that catch the reader's attention and greatly interrupt the flow.
Citations	Sources are cited correctly in APA format.	Most sources are cited correctly in APA format.	Few sources are cited correctly in APA format.	No sources are cited correctly in APA format.

In both rubrics, it is clear what is expected by the instructor in terms of level, accuracy, relevance, and composition.

Summary

The facilitators share a number of strategies as described above. Not all facilitators used all the strategies every time. The selection of the strategy or strategies to be used when setting up a discussion or composing a post depended on the situation. Looking across the participants, a couple of participants utilized groups of strategies for the examples they provided. For example, Rick and Casey used enlightenment and redirection quite a bit to keep their class focused on the academic goals. Maya and Anna used encouragement in almost all of their selected posts, and both used a combination of encouragement and focus to keep the discussion moving forward.

By far the most prevalent strategy was focus – which was used both by reiterating student statements and by adding a question to the discussion that only dealt with one of many issues brought up by the students.

To get a better picture of the frequency of the strategies, a larger study that analyzed the entire course for each of the facilitators would be necessary. The frequency of strategies reported in this study are distorted by the self-selection of the posts by the participants.

APPLYING GENERAL EXPERTISE FRAMEWORKS IN LIEU OF A NEW THEORY

The next logical step in grounded theory analysis is to create a theory from the themes and commonalities found in the data that would fully explain what was found in the study. However, as mentioned in the introduction, this study replaces this step by applying generic framework of expertise. Because the frameworks are external to the data set, it is not expected that the frameworks will fully explain what emerged from the

study. Hence, this section focuses both on what fits well within these framework as well what does not fit.

Online facilitation is just one task of being an online instructor. The participants in this study are likely experts in many aspects of online instruction, including, but not limited to the content area in which they are teaching, creating and grading assessments, designing and implementing assignments, and grouping students for instruction. As a number of the participants also have leadership roles in their colleges, they could be considered experts in managing and designing academic program. Hence, when attempting to apply these frameworks of expertise to just the facilitation component, we will likely run into areas where it can not be easily disaggregated from the other areas of expertise. A clear example would be the strategy of adding enlightenment to the student experience by sharing their expertise in the field above and beyond the course materials. This is a sample how their expertise in the field is deeply interconnected with their expertise in online facilitation.

The following discussion walks through common characteristics of experts. For each component, the application of the component to this study's results is discussed. Some of the components fit rather well, while others do not fit as well.

The set of expertise characteristics described in Chapter 2 have been divided into three main categories: (a) problem solving, (b) knowledge, and (c) continuous improvement. Problem solving characteristics describe how experts approach a domain-specific problem and how they execute the solution to the problem. Knowledge characteristics describe how experts store domain-specific knowledge. Continuous improvement characteristics describe how experts continuously attack harder problems and look for new and better solutions for old problems.

It is important to note before sifting through the characteristics that this whole process is based on a circular definition that may or may not be valid. The participants of this study are assumed to be experts. The expertise criteria used in the selection process do not align to the characteristics outlined below. If an individual participant does not align with a characteristic below, the misalignment could be attributed to either the participant not being an expert or that the general characteristic outlined below is not valid for online facilitators. Because there is no objective way of defining expertise in online facilitation – in contrast to other field such as chess where the number of wins indicate their expertise, or medical diagnosis where the outcome is known and can be tested - the definition of expertise is always a little weak. A future study may address this by attempting to objectify the quality of online discussions.

The first set of characteristics that are applied to the data are related to problem solving.

- "Experts notice features and meaningful patterns of information" (Bransford et al., 1999, p31; Chi, Glaser, & Farr, 1988)
- Experts categorize and weigh provided inputs based on their relevance to the predicament and use “broken leg” cues. (Camerer & Johnson, 1991)
- Experts use forward-reasoning instead of means-end analysis to solve problems (Bereiter & Scardamalia, 1993)
- Experts time their actions well (Dorner & Scholkopf, 1991)
- Experts perform intensive analysis of the problem and self-reflective modification of one’s own mode of action (Chi et al., 1988; Dorner & Scholkopf, 1991)
- Experts build representations of the problem before searching for a solution (Ericsson & Smith, 1991)

The "problem" that is being solved in online facilitation is knowing when and how to interject in a discussion. The characteristics outlined above relevant to expert problem solving align well with the characteristics of the study participants and explain much of what emerged from the data. Each of the problem-solving characteristics is listed below with a discussion on how it aligns with the data from this study.

Experts notice features and meaningful patterns of information.

This is one of the primary goals of online facilitators – they need to sift through hundreds or even thousands of messages and quickly make a decision of whether or not to post to the discussion. Even with the huge amounts of information, the facilitators notice changes in participation patterns (students who drop off for some reason) and find specific phrases and statements made by students that align to course objectives.

Other meaningful patters include the tone and direction of the conversation. Without the additional cues of volume, tone of voice, and body language, it is not a trivial exercise to determine when its time to redirect a conversation away from a topic or to bring forth an authoritative tone to calm an uprising or disagreement among students.

Both Casey and Jennifer provided examples where they noticed that the discussion needed to be redirected based on the tone and nature of the language being used by the students. In Casey's example, she sealed off the discussion about a topic that was changing direction and provided a new avenue for exploration. In Jennifer's case, she took a stand to keep a student from dominating the discussion and taking it in a negative direction. In Julie's case, she recognized that the discussion was going exactly as it was in a prior year, and was able to divert the discussion earlier in the current section.

It is not easy to describe what the cues are, however. Online discussions are highly situational, and the reaction to these cues are not easily observed; they can be

based on historical information about the students involved as well as what has happened in past courses. To better understand this characteristic, study which conducted think-aloud interviews while the facilitators were actually reading through discussions for the first time (as opposed to in a historical manner as was done in this study) may provide additional insight into the cues and patterns that facilitators see before they act.

In addition to the above, facilitators often made connections between single phrases posted by a student and either new information that was not part of the course or with information that the student has already read. They understood where and how these connections would be beneficial to their students.

Experts categorize and weigh provided inputs based on their relevance to the predicament and use "broken leg" cues.

The inputs provided in an online discussion include the tone, frequency, and content of student messages. Facilitators responded to student posts based on at least these three inputs. When one of Jennifer's students began to be forceful, Jennifer noticed the change in the student's tone, and responded with a more authoritative tone to maintain the expected level and tone of the discussion.

Broken leg cues, by definition, are not common. One example provided by Casey demonstrates how she noticed that one of her students had dropped off the discussion on the death penalty; Casey then hypothesized that the student may have dropped off because of his personal involvement with death row inmates (which she had learned much earlier in the semester). Casey confirmed her suspicion and worked out a mutually agreeable solution with the student. The "broken leg" in this case was that the student was involved with death row inmates; a normal course of action would have been to provide a low grade to the student for not participating, and remind him by email that he needs to participate.

Overall, this characteristic explains one action well, but it is difficult to make a judgment of the validity of the characteristic. This is somewhat related to the fact that broken leg cues are not all that common to begin with it was fortunate to have even one example in limited study.

Experts use forward-reasoning instead of means-end analysis to solve problems

While the experts were able to articulate the overall goals for their online facilitation easily either directly or in context of their facilitation actions, the facilitators did not describe processes in which they outlined their actions based on a particular end goal. The facilitators knew what to write and knew what the intended impact would be when they wrote it. If this characteristic was not valid, the facilitators would have provided a backwards-reasoning path starting with the result of a discussion outcome, and ending with the action, or series of actions, needed to be taken to reach that outcome.

This not to say, of course, that the participants did not take significant care when composing their results. Some facilitators, like Louise, were very careful to compose their messages and ensure that at least the intention of the message was not lost in the probable interpretation of the message.

Experts time their actions well

Most facilitators wanted their discussions to self-sustain, and interjected only when necessary. However, the expert facilitators who gave examples of corrections made these public corrections quickly in order to prevent the rest of the class from making the same mistake. All facilitators maintained daily contact with their students and made sure that they posted to the discussions at least once daily. This timing of their presence was implied to be critical to meeting student expectations and for driving student behavior. The facilitators understood that if they were out of the discussions for long, the students would feel that they were being left alone and might not participate. One facilitator

simply gave the students the week off when she knew that she would not be able to be online as frequently as normal.

The problem with this characteristic is that there is no way of comparing the timing with another similar situation. It seems that the facilitators time their actions well, but it may very well be the case that they could be timing their actions much better (especially if the optimum time is later than the facilitators actual action.) The online discussions are highly situational and not easily compared.

A study that attempted to provide a time-released simulation of a discussion might be able to help determine if these experts were indeed timing their actions well.

Experts perform intensive analysis of the problem and self-reflective modification of one's own mode of action.

It is not clear that the facilitators performed an intensive analysis of the problem before posting. In some respects, this characteristic contradicts the ability of the experts to use forward reasoning. Most facilitators did read through a set of postings at once to get a feel for the discussion before deciding what to post, if at all. In that respect, it could be that the holistic approach to responding after reading the entire discussion may be considered an analysis of sorts, but not an intensive analysis.

However, the facilitators did perform some self-reflection and modification of their own actions, most facilitators read and reviewed their postings before posting to the public areas. Some, like Louise, even wrote the message and let it sit for a period of time before she reviewed it and posted it to make sure that the context would not be misinterpreted. Those who edited their postings reflected on the spelling, punctuation, grammar, implied emotion, and word choice.

Experts build representations of the problem before searching for a solution

In this study, none of the facilitators built a representation of the problem other than the normal presentation provided by the technology (e.g. a listing built by a blog.) If this had been a valid claim, the facilitators would have made more use of diagrams to show how the discussion was unfolding or to make sense of a complex situation.

While visual diagrams are common in other fields, there are very few informative visual displays that indicate the progress or current situation of an online discussion. This may be an area where future studies could look at the utility of abstract visual representations of online discussions.

Overall, the general expertise characteristics related to expert problem solving align very well with the data from this study. The problem solving characteristics aligned well with the common strategies used by the facilitators; for the other characteristics of expertise, the facilitator his/herself aligns well with the framework, but the strategies are less of a match.

Content knowledge characteristics of experts are listed below:

- Experts have acquired a great deal of content knowledge that is organized in ways that reflect a deep understanding of their subject matter.
- Experts' knowledge cannot be reduced to sets of isolated facts or propositions, but, instead, reflects contexts of applicability: that is, the knowledge is 'conditionalized' on a set of circumstances"
- "Experts are able to flexibly retrieve important aspects of their knowledge with little attentional effort." (Bransford et al., 1999, p 31)

The above characteristics align well with the knowledge of the facilitators. Each of the problem-solving characteristics is listed below with discussion on how the characteristic aligns with the facilitators in this study.

Experts have acquired a great deal of content knowledge that is organized in ways that reflect a deep understanding of their subject matter.

All but one of the facilitators began facilitating online discussions before anyone really knew what online facilitation meant. This group of pioneers had to formulate their own concepts and guidelines for facilitation with little or no support from the outside. Each demonstrated clear understanding of the impact of their actions and knew what to expect from their actions. Some of the facilitators actively researched the field of online education. As educators, they were all very aware of the emotional and motivational impact of their public and private feedback, and were careful to reinforce positive behaviors and correct negative behaviors with prompt and specific feedback.

As mentioned earlier, the expertise of these facilitators is not limited to online facilitation. Each of the facilitators has expertise in their subject area. They demonstrate their deep knowledge of the subject area by sharing interesting additions to the course content as well as building out the course materials.

This characteristic would likely fit any study of instructors, online or traditional, that have been teaching the subject for many years. While it aligns to the data, it is not inherently insightful or specific.

Experts' knowledge cannot be reduced to sets of isolated facts or propositions, but, instead, reflects contexts of applicability: that is, the knowledge is "conditionalized" on a set of circumstances.

The only rule that was given a number of times was to correct factual or conceptual errors quickly. Other than that general rule, the responses provided by the facilitators had underlying strategies, but the composition of the message was highly contextualized to the people involved in the course and the topic of discussion.

However, on could postulate that some of the actions that the facilitator takes could be distilled into at least a fuzzy rule set that at least provided indicators or suggested actions to facilitators, much in the way that an oil light in your car is a suggestion to stop driving, but the driver still has the option of ignoring the warning.

Again, this characteristic would fit well for most instructors and is not specific to the online instructors. In fact, because all of the communications in online courses is captured electronically, it has a much bigger chance of being automated or rule-based since software is getting smarter each year.

Experts are able to flexibly retrieve important aspects of their knowledge with little attentional effort.

When composing messages, the facilitators relied almost solely on their personal expertise to decide when and how to post. In contrast, Jennifer's TA always checked with Jennifer before deciding how and when to post. The facilitators reflected on their posts, but did not generally rely on any outside facilitation support sources – other than content related sources - to help them with their composition.

When reviewing the amount of time spent on reading and composing messages, there were some differences among the facilitators on how quickly they were able to read and respond to the discussion. Some were very reflective, others responded to every message, and the rest were very quick about reading though the discussions and deciding when to post.

Because there is so much variation on time spent on the discussions when normalized against the number of students in the section, this characteristic may not hold true for all of the experts in this study. Of course, the circular reasoning of how experts are defined and selected would allow us to say that those who did took longer to read and

compose messages were not quite experts. Either way, the data does not support this characteristic across the board for the full set of participants.

Bereiter and Scardmalia added the concept of continuous improvement to the expertise literature. These characteristics look at the expert as a dynamic person instead of just a state at a given time. When applying these characteristics to this set of online facilitators, it has little to do with the strategies they use right now, and much to do with the process by which they learned their strategies. The characteristics are:

- Experts constantly reinvest in their learning and advance on difficult problems in their domain.
- Experts tackle more complex representations of recurring problems
- Experts rely less fully on routines and seem to be engaged in extending their knowledge rather than merely exploiting it (Bereiter and Scardamalia 1993)

The common strategies of the expert facilitators did not align well with the continuous-improvement characteristics of experts found in the literature because general strategies in online facilitation are focused on day-to-day interactions while the continuous improvement characteristics are more focused on personal and professional growth. However, the general characteristics of the participating facilitators aligned very well with the expertise characteristics. The "continuous improvement" in online facilitation is defined here as constantly reflecting on and improving the facilitation process each year based on knowledge gained from personal experience and from external sources.

Experts constantly reinvest in their learning and advance on difficult problems in their domain.

All of the facilitators provided examples on how they had changed their facilitation process over the years. Some, like Maya, claimed to have "aha" moments when they realized the core differences between traditional face-to-face instruction and online instruction, and began to treat online discussions as a completely new form of communication. A number of the facilitators, notably Rick and Casey, try new technologies almost yearly in their courses and evaluate the impact.

Experts tackle more complex representations of recurring problems

Most of the facilitators re-use discussion topics from year to year. Each time they use a topic from a previous year, they reflect on what happened the prior year and adjust their intervention strategies accordingly. Jennifer, for example, knew that the issue of changing scores on a management skills inventory would be connected to the question innate vs. learned management skills; hence she addressed it immediately after the first student began to make the connection. Casey took two attempts at the death penalty topic and has decided to try a different take or change the topic entirely next year.

Experts rely less fully on routines and seem to be engaged in extending their knowledge rather than merely exploiting it

All of the facilitators described routines for how they read and composed messages. However, many of the facilitators noted how these routines had evolved over the years. As mentioned earlier, facilitators also try new technologies to see if they can improve the overall experience for them and their students.

Overall, the characteristics found in general frameworks of expertise explained the general behaviors of the facilitators well. If the analysis had been restricted to just the strategies of the facilitators, the frameworks would not have applied well since many of the characteristics in the frameworks were relative to the person, and not the actions of the person.

The framework seems to be valid for more than just online facilitation, as its obvious that the characteristics could easily be applied to the facilitators' other areas of expertise such as subject area expertise, general instructional expertise, and so forth.

IMPLICATIONS FOR FUTURE RESEARCH

Research that builds on this study could attempt to validate the commonality of the expert strategies discovered in this study across a much larger audience of facilitators. There may be an effective and simple way of measuring the expertise level of online facilitators. Each of the strategies could be the focus of other research studies. For example, what is the impact of the timing and wording of direct feedback on volume and quality of student posting?

A more critical question that comes out of this study is: "Do the strategies used by experts actually improve student outcomes?" Because outcomes are difficult to define, future research studies may look at affective impact, retention, conceptual knowledge, communication, and problem solving skills and how they are impacted by single or sets of online facilitation strategies.

IMPLICATIONS FOR ONLINE FACILITATOR TOOL DEVELOPMENT

The expert online facilitators in this study shared similar procedures for facilitating online discussion. Ironically, most of the major e-learning platforms have little or no tools that directly support the primary strategies used by these expert facilitators. Online facilitation tools need to be centered on the facilitator, and not the other way around. The existence of such tools would make the facilitators more efficient and able to handle larger teaching loads with less actual effort. Once tools that align with

expert strategies exist, novice facilitators could begin to act like expert facilitators more easily.

IMPLICATIONS FOR ONLINE FACILITATOR TRAINING

Converting someone into an expert online facilitator is a difficult process. The results of this study indicate that all of the experts become experts through individual experience, working closely with a small set of colleagues, or through a mentoring model. While many received direct support from their institutions, only a few received any significant training for online facilitation. However, this does not indicate that training facilitators to behave like experts is impossible. The strategies described in this study can become critical components of effective online facilitator training. Even a process of reviewing single posts and working through the experts decision making process – like the process that was done during the data collection for this study – might provide a cheaper, faster, and more scalable alternative to direct mentoring with similar results.

LIMITATIONS OF THIS STUDY

As this is a descriptive study with only seven purposefully selected participants, the results of this study cannot be generalized to a larger population. By no means should the list of common strategies found in this study be considered to be exhaustive; there are certainly other strategies that are shared among other expert facilitators. Because the definition of expertise is not well defined in this field, the seven participants may or may not align with another researcher's definition of an expert online facilitator.

CONCLUSION

Online facilitation, like most domains of expertise, is highly contextualized. Each facilitator in this study worked within a unique context with different universities,

different students, different backgrounds, and different courses. Regardless of these differences, the facilitators applied a number of similar goals and strategies when deciding how and when to post in their asynchronous online discussions.

Most of the participating facilitators shared four common goals for their asynchronous online discussions: (a) the discussion aligns to course objectives, (b) all students participate in the discussion, (c) the discussion demonstrates high-level thinking, and (d) the students sustain the discussion with limited intervention from the facilitator. To reach these goals, the facilitators used similar affective, academic, and operational strategies.

To ensure that the discussion aligns to course objectives, the facilitators quickly redirected students who were either off-topic or incorrect. They established an authoritative presence reinforced through frequent posts and quantitative assessment of student participation. When student participants stated key concepts in their own words, often related to life experiences, the facilitators focused the group on these key concepts through positive feedback, additional information, and exploratory questions.

Getting all students to participate in the discussion required a balance of carrot and stick. Facilitators drove students to the discussion through mandatory participation that comprised a significant component of the course grade and imposed rules for when and how to post. They kept the students discussing by encouraging significant student-to-student interaction at a higher level of thinking and constantly digging deeper into more and more interesting topics.

In the absence of short time limits imposed by face-to-face meetings, the facilitators set expectations for higher-levels of thinking, reflection, exploration, synthesis, and analysis. The facilitators modeled expected behavior through their own posts showing how to continuously dig deeper and synthesize connections between the

discussion and course materials. Some provided detailed rubrics that quantified their expectations for appropriate levels of student interaction. The facilitators gave prompt feedback, both public and private, to students who were – or were not – participating at the desired level. At the same time they drove the students to think independently, the facilitators utilized their superior subject matter knowledge to enlighten the group with relevant new ideas, facts, and concepts.

Many of the facilitators attempted to create discussions that the students sustained with limited involvement of the facilitator. To reach this goal, the facilitators utilized a broader range of strategies than for the other goals. They organized groups, assigned responsibilities, modeled behavior, and kept quiet when the discussion was going well.

As predicted by the expertise literature, the group of facilitators developed these strategies and goals through years of continuously improving their knowledge of the field of online learning and through continuous improvement based on prior experience and student feedback.

The facilitators demonstrated problem-solving characteristics similar to characteristics of experts in other domains. Most facilitators gathered a comprehensive look at the progress of the discussion before deciding when and how to act. They quickly recognized meanings of subtle hints of changes of participation levels, tone of discussion, and content misconceptions. They took purposeful action by crafting posts that incorporated strategies selected to obtain their facilitation goals.

However, the actions facilitators took were not always aligned with the tools that they were provided. While not an intended result of this study, it became evident that the most common course management systems did not provide adequate online discussion tools that aligned with their goals and strategies. Most facilitators were either exploring other options or voicing concerns about capabilities.

In conclusion, the expert facilitators in this study shared common goals and strategies for online facilitation of asynchronous discussion in online college courses. The expertise frameworks developed for other domains aligned well to the strategies and characterstics of this set of online facilitators.

The results of this study should (a) influence development of online facilitation tools that align to expert facilitation strategies, and (b) drive further research to determine if the strategies shared by these expert facilitators lead to improved student achievement.

Appendix A: Email Invitation

Invitation to Participate
Expert Facilitation of Asynchronous Discussions in Online College Courses
Mark Luetzelschwab

Dear [name of participant]

You are invited to participate in a research study titled: Expert Facilitation of Asynchronous Discussions in Online College Courses . I, Mark Luetzelschwab, am conducting this study as part of my dissertation with Professor. Paul Resta, Ph.D. as my advisor.

This study will investigate online facilitation through the lens of expertise frameworks by investigating the strategies behind actions made by online facilitators in asynchronous discussions that are part of post-secondary level online courses.

The results of this study may benefit novice facilitators by providing them with many examples of online facilitation strategies. Published articles and reports of this study may add to the current research on online facilitation. The results may also influence design and development of software tools aimed to improve online facilitation. The analysis in the expertise framework may improve online facilitator training.

You have been identified as a potential participant because you:

1. Have been recommended by [] as an expert facilitator
2. Are an active facilitator in an asynchronous online discussion that is an integral part of an online course at the post-secondary, graduate, or professional development level

If you choose to participate, you will participate in one scheduled one-hour telephone interview during which I will attempt to learn:

1. General information about your online course and how it runs. Questions will be based on any resources that you are able to send prior to the interview such as course syllabi, activity descriptions, evaluations, etc.
2. The strategies behind a set of your recent actions (posting, emails, or other communications to course participants) regarding your online discussions. The intent is to discover how your perspectives influence your strategies for these actions, regardless of the depth or breadth of the actual action.

After summarizing our conversation and reviewing relevant materials, I will ask you to review these summaries to ensure quality, accuracy, and privacy. This can be completed via telephone or over email. All aspects of your participation will be confidential; your

identity will be masked with a pseudonym and your context will be described in abstract terms when necessary.

The total time commitment will be approximately two hours. I will compensate you with undying gratitude for your willingness to share your time and your thoughts and by sending a copy of the study when it is complete.

Summary of Process

If you choose to participate, **you will be asked to:**

1. Respond affirmatively to this letter with your mailing address
2. Review, sign and return a consent form in the provided self-addressed stamped envelope. A copy of this form is attached for your review.
3. Schedule a 1-hour block of time for our interview
4. Select 5-6 posts that you have made to an asynchronous discussion in one course that you are currently teaching online. The posts can vary in length and purpose. I will need the full text of your posting, but not the rest of the discussion.
5. Participate in the 1-hour interview. I'll send an agenda for the interview at least one day prior. The interview will spend about 15-20 minutes on your context, and the remainder of the time investigating strategies behind the set of actions you compiled.
6. After 2-6 weeks, review my summary of your context and strategies for accuracy and indicate areas that are incorrect or need to be changed to protect your privacy.

Confidentiality

Authorized persons from The University of Texas at Austin and the Institutional Review Board have the legal right to review this research records and will protect the confidentiality of those records to the extent permitted by law. If the research project is sponsored then the sponsor also has the legal right to review your research records. Otherwise, your research records will not be released without your consent unless required by law or a court order.

All audiotapes and/or digital recordings of telephone interviews will be transcribed. After transcription, the audiotapes and/or recordings will be erased. Transcriptions will be stored in a locked file cabinet in a locked office. All information that would reveal your identity will be removed from the transcripts. All digital files and printed materials that link your identity to this study will be deleted or destroyed at the end of this study.

If the results of this research are published or presented at scientific meetings, your identity will not be disclosed.

Questions?

Please contact me, Mark Luetzelschwab at luetzm@mail.utexas.edu or (512) 826 4393 (cell) or (214) 341 8447 (h). My advisor, Professor. Paul Resta, Ph.D. can be reached at Paul_Resta@teachnet.edb.utexas.edu or (512) 471 4014.

Appendix B: Consent Form

IRB# _____

Informed Consent to Participate in Research

The University of Texas at Austin

You are being asked to participate in a research study. This form provides you with information about the study. The Principal Investigator (the person in charge of this research) or his/her representative will also describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

Title of Research Study:

Expert Facilitation of Asynchronous Discussions in Post-Secondary Online Courses

Principal Investigator(s) (include faculty sponsor), UT affiliation, and Telephone Number(s):

Mark John Luetzelschwab, Doctoral Candidate, Curriculum and Instruction at The University of Texas, (512) 232 9477 (w) or (512) 257 2230 (h). This project is sponsored by Professor Paul Resta, Ph.D. (512) 471 4014 (w).

Funding source:

This project is self-funded by the researcher as dissertation research.

What is the purpose of this study?

This study will investigate online facilitation through the lens of expertise frameworks by investigating the strategies behind actions made by online facilitators in asynchronous discussions that are part of post-secondary level online courses.

Why were you chosen to be part of this study?

You have been identified by an expert in the field of instructional technology as an experienced or expert facilitator who is currently facilitating at least post-secondary level online course.

What will be done if you take part in this research study?

If you choose to participate, **you will be asked to:**

1. Respond affirmatively to this letter with your mailing address
2. Review, sign and return a consent form in the provided self-addressed stamped envelope. A copy of this form is attached for your review.
3. Schedule a 1-hour block of time for our interview
4. Select 5-6 posts that you have made to an asynchronous discussion in one course that you are currently teaching online. The posts can vary in length and purpose. I will need the full text of your posting, but not the rest of the discussion.
5. Participate in the 1-hour interview. I'll send an agenda for the interview at least one day prior. The interview will spend about 15-20 minutes on your context, and the remainder of the time investigating strategies behind the set of actions you compiled.
6. After 2-6 weeks, review my summary of your context and strategies for accuracy and indicate areas that are incorrect or need to be changed to protect your privacy.

Your total time commitment is estimated to be less than 2 hours over the course of two months.

What are the possible discomforts and risks?

There may be risks that are unknown at this time.

The primary risk of this study is loss of confidentiality. All publicly available documentation will use pseudonyms to protect your identity, and documents that link your identity to your pseudonym will be destroyed at the completion of the study. All computer records containing your identity will be kept on a password-protected computer.

What are the possible benefits to you or to others?

The results of this study may benefit novice facilitators by providing them with many examples of online facilitation strategies. Published articles and reports of this study may add to the current research on online facilitation. The results may also influence design and development of software tools aimed to improve online facilitation. The analysis in the expertise framework may improve online facilitator training.

The completion of this study will help the researcher to earn his Ph.D.

If you choose to take part in this study, will it cost you anything?

No financial costs are expected.

Will you receive compensation for your participation in this study?
What if you are injured because of the study?

You will not be compensated for your participation in this study. No medical treatment will be provided or available in case of injury as a result of this study.

If you do not want to take part in this study, what other options are available to you?

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with The University of Texas at Austin. If you do participate, you may refuse to answer any question without consequence.

How can you withdraw from this research study and who should I call if I have questions?

If you wish to stop your participation in this research study for any reason, you should contact: Mark Luetzelschwab at (512) 232 9477 or (512) 257 2230. You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits for which you may be entitled. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

In addition, if you have questions about your rights as a research participant, please contact Clarke A. Burnham, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, 512/232-4383.

How will your privacy and the confidentiality of your research records be protected?

Authorized persons from The University of Texas at Austin and the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. If the research project is sponsored then the sponsor also has the legal right to review your research records. Otherwise, your research records will not be released without your consent unless required by law or a court order.

All audiotapes and/or digital recordings of telephone interviews will be transcribed. After transcription, the audiotapes and/or recordings will be erased. Transcriptions will be stored in a locked file cabinet in a locked office. All information that would reveal your identity will be removed from the transcripts. All digital files and printed materials that link your identity to this study will be deleted or destroyed at the end of this study.

If the results of this research are published or presented at scientific meetings, your identity will not be disclosed.

Will the researcher(s) benefit from your participation in this study?

The researcher will benefit from the results by completing one of the requirements of a Ph.D in the Curriculum and Instruction department of The University of Texas. The researcher intends to use the results of this study for the purposes of publication of research papers and books, future research, and software development.

Signatures:

As a representative of this study, I have explained the purpose, the procedures, the benefits, and the risks that are involved in this research study:

_____

Signature and printed name of person obtaining consent **Date**

You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this Form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights. You may keep a copy of this consent form for your records.

_____

Printed Name of Subject **Date**

_____

Signature of Subject **Date**

_____

Signature of Principal Investigator **Date**

Appendix C: Interview Protocol

Interview Protocol

Thank you for agreeing to participate in this study. I really appreciate your willingness to take time out of your already busy schedule to spend an hour with me talking about your online facilitation.

In order to optimize the time we spend on the phone, I'd like to give you a heads-up about the type of questions I'll be asking and also a little bit of my background and perspective on research so you know where I'm coming from. Also, I have a few pre-interview requests that are very important to the success of the second part of the interview.

Optionally, if you – like many other online facilitators – prefer to type than talk, you can complete most of the interview questions in this doc and send them back. We'll still have the interview, but it will be much shorter.

Pre-Interview Requests: (things I'm asking you to do before our interview)

1. Select ***one*** online course that you have facilitated this semester that had an integral asynchronous discussion. Please locate the course description for the course if it is not publicly available.

2. From the asynchronous discussion of the selcted course, please locate ***five posts*** that you have made to discussion threads. When choosing your posts, you may choose any five posts from one thread, one post from five threads, or any combination thereof. Posts can be any length, any purpose. You may want to print, bookmark, save to disk, etc., so you can reference each one of posts during our interview. I will *not* need a copy of the entire discussion, but I will need a copy of the text you created (see #4).

3. For ***each of the posts*** we discuss, I'll ask you to send the actual text of your post to me via email. If you can, please email the five posts to me (luetzm@mail.utexas.edu) prior to the interview.

4. ***Optional***: Complete and return this document. I have included the general questions I will ask you during the interview in this document. If you prefer, you can type in your responses and send back to me before your interview. The only one that has to be asked during the telephone interview is the one in the shaded box.

About Me

I am completing a Ph.D. in Instructional Technology in the Curriculum and Instruction department of the College of Education at The University of Texas at Austin. My undergraduate and masters degrees are in Physics and Nuclear Engineering from Dickinson College and Rensselaer. I have launched or helped launch a number of companies, Lenox Softworks, Edvance, and now Early College Corporation, American College of Education, and Whitney International University System; all of these companies focus on education. At UT, I helped grow the Vaughn Gross Center for Reading and Language Arts through grants for online professional development and online communities in Texas.

Online facilitation is a complex task, so many of my teams over the years have sought guidance from the literature. As we read more and more about online facilitation, we found that there were many generic guidelines and tips and tricks about what to say, but few were based on any sort of research. While reviewing the literature, I also found that expertise research in fields such as medical diagnosis, judicial sentencing, and writing (to mention a few) were quite relevant to discovering and explicating a complex process like online facilitation. Hence, this study employs methods similar to those used in prior expertise research.

On the personal side, I am married with three young children and live in Dallas, TX. I grew up in Pennsylvania and have lived in PA, MA, NY, and TX.

Interview Date and Time:	
Post #:	
Interviewee:	
Interviewer:	

The purpose of this interview (and this study) is to take a closer look at the complex reasoning and perspectives that influence your postings as a facilitator in an online course. Your perspectives will be compared and contrasted with other facilitators' perspectives through a lens of expertise theory and frameworks. The end result will be a description of how expert online facilitators make decisions about how, when and what to post. This discussion will also determine if expertise frameworks developed for other domains can apply to the complex process of online facilitation.

Part 1: You and Your Course

Your Background Information

Tell me a little about your professional background. If you like, you can send a bio or vita at some later time.

Why did you become an online facilitator?

How long have you been an online facilitator?

How did you learn to be an online facilitator? Are you still learning? If so, what do you do to keep learning about online facilitation?

Please describe your perspectives on online facilitation. When facilitating a course, what are your underlying goals for facilitation?

Are there any primary influences (people, documents, events, etc) on your current style (goals, underlying beliefs, etc) of online facilitation? If so, what are these influences?

How would you describe a successful online course?

How would you describe a "good" online discussion?

Do you actively participate in mentoring, training, or research on online education or online facilitation?

Background Information on the Course

Course Title?

Course Content Area?

Estimated number of students?

Duration of course?

Types of communication between you and your students? (asynchronous -discussion, email, synchronous, face-to-face)

Average Frequency of interaction? (daily, weekly)

You and this Course

What do you see as your overall goals for your online facilitation in this course? In other words, what are you trying to achieve through your presence in this course?

Can you describe the context in which you facilitate your online course? Numbers of students (range or average), duration of engagement with the students, focus of curriculum, types of interaction (asynchronous -discussion, email, synchronous), frequencies of interaction (daily, weekly)

Do you have any fundamental principles of teaching and/or online facilitation that you follow when facilitating?

Part 2: A Closer Look At Some Of Your Posts

In this part of the interview, I will ask a series of questions about each of the five postings that you selected prior to the interview.

[REPEAT FOR EACH SELECTED POST]

Interview Date and Time:	
Post #:	
Interviewee:	
Interviewer:	

About the Post and the Thread:
What was your post: (Exact text)

Where was the post relative to the original topic?: (e.g. second response to the first response)

Roughly, how much time had elapsed since the original topic (the first post in this thread) was posted ? If the discussion had a start and end time, when was this post made?

Where was the thread relative to the start and end times of the course? Near the beginning, the middle or the end?

Why did you choose this post? How does this thread compare to other threads in your course discussion area?

Walk me through your decision to post. Try to describe the thought process that led to your decision to post, as simple or complex as it may be for this particular post, in as much detail as you can. In other words, what about this particular thread encouraged you to post? Go ahead and walk me through, I may ask some clarification questions when you complete.

(this is the primary question – we will spend the most time discussing the specifics)

Closing Questions

Understanding that you always have the option of not posting, why did you choose not to wait in this case? In other words, what do you think would have been the consequences of not posting at this time?

Do you think that your goal for your post was achieved? Why or why not? How can you tell?

[END EACH POST]

Part 3: Overall Wrap Up
Tell me about the composition process, or processes, that you follow when making a post as the facilitator of a course. In other words, after you have decided to post, what are the next steps you take before actually submitting your post? You may answer this question generally, or for a specific post.

END OF INTERVIEW

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Vita

Mark Luetzelschwab was born in Harrisburg, Pennsylvania on August 9, 1970, the son of Marcia A. and John W. Luetzelschwab. He earned a bachelors degree in Physics from Dickinson College and a bachelors degree in Nuclear Engineering from Rensselaer Polytechnic Institute. He also earned a Masters of Engineering in Nuclear Engineering and Engineering Physics from Rensselaer Polytechnic Institute. Mark started work on his Ph.D. in Instructional Technology in 1998 in the department of Curriculum and Instruction at The University of Texas at Austin. He has been actively developing award-winning educational software and professional development for sixteen years and has helped launch a number of successful educational and commercial companies, including Lenox Softworks, Edvance, Early College Corporation, the American College of Education, and Whitney International University System.

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